DOCUMENT RESUME

ED 164 578 TM 007 969

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TITLE Individualizing Testing in a State Assessment Program. Metric Measurement and Music. The Michigan Educational Assessment Program.
PUB DATE Mar 78
NOTE 137p.; Not available in hard copy due to marginal legibility of original document; Paper presented at the Annual Meeting of the National Council on Measurement in Education (Toronto, Ontario, Canada, March, 1978) ; Best copy available

EDRS PRICE MF-$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS *Achievement Tests; *Educational Assessment; Educational Objectives; Elementary Education; Grade 4; Grade 7; *Individual Tests; *Metric System; *Music; Performance Tests; *State Programs; Testing Programs; Test Items; Test Results
IDENTIFIERS Michigan; Michigan Educational Assessment Program; Test Manuals

ABSTRACT

As part of the Michigan Educational Assessment Program, a sample of approximately 2,000 fourth and seventh grade students were tested in music and metric measurement. Teachers and curriculum specialists helped to develop individualized tests which could measure the attainment of objectives that could not be tested with group-administered items, such as multiple choice tests. The tests were administered and scored by volunteers from state teaching associations, rather than by personnel in the 192 schools involved. The test examiners and specialists who reviewed the tests responded to a questionnarie about the costs and benefits of developing and administering individual tests. They generally felt that the expenses involved in such testing were justified, because the type of information provided about state and local educational programs and about student skill attainment was worth it. Appendices include measurement objectives for both metric and music tests, the tests themselves, instructions for administering and scoring, and resulting item statistics. (GDC)

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INDIVIDUALIZING TESTING IN A STATE ASSESSMENT PROGRAM

Metric Measurement and Music

The Michigan Educational Assessment Program

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Paper presented at the National Council of Measurement in Education Convention, Toronto, Ontario, March, 1978.

TM007949

Introduction

Historically large scale testing at the elementary and secondary school level has meant assessing large numbers of students in as short as time as possible in order to gain the most reliable information about student skill attainment. Most test developers legitimately feel that it is possible to gain this information from well-written multiple choice questions utilizing machine scorable answer formats. Although more time is spent at the outset in constructing the tests, the scoring is relatively error-free and quick. As a result there are many subject areas and aspects of certain subject areas which have not been included in state assessment programs, commercially available tests, and even teacher constructed tests designed for classroom use. The most outstanding exception to this is the National Assessment of Educational Progress, which has included production and performance type items in most of the subject areas they assess.

In addition, most tests utilized in state testing programs, whether they be purchased from publishers or developed at the state level, have almost exclusively emphasized reading and mathematics skills. Funding for additional teachers, programs and teaching materials are often based on low scores in these two basic skill areas. Recent press about declining test scores for college bound students has emphasized the concern with reading and mathematics programs in the schools and has contributed to the present cry for "back to basics." As a consequence, many schools are so intent upon raising reading and mathematics scores that other curriculum programs are given short-shrift or even neglected. And as millages are not passed in local districts, programs and special curriculum teachers are cut-back or eliminated entirely.

The state education agency has the role of leadership in curriculum development and recommendations. Those states with statewide assessment programs place great emphasis on the subjects tested in the programs. Local schools are concerned how the children are performing compared to state averages. Undoubtedly, if reading and mathematics scores are low, additional time will be spent on reading and mathematics. To answer some of these concerns the Michigan Educational Assessment Program (MEAP) decided, in addition to the every-pupil testing in reading and mathematics at grades four and seven, to include two subject areas, metric measurement and music, to be administered to a sample of students in the state.

In order to validly assess student skills and knowledges in the two subject areas, it was necessary to develop instruments other than paper-pencil, multiple choice items. Such tests can only be administered on an individual basis.

I. Objectives

The purpose of the program was to develop and administer measures to gather data on objectives that cannot be tested with group-administered items. The data can be used by educators and other citizens in the state to examine educational programs in each of these subject areas. Reports of results were to be given to interested persons in local districts. Results will also be used for decisions on funding of experimental programs at the state level. The state agency thus can provide important state level information about the status of educational programs.

II. Instruments Used

The music and metric measurement tests were developed with the assistance of teachers and specialists from the respective curriculum areas. Test items were tried out in 1975-76 in a few local districts,

reviewed and revised by mathematics and music educators and compiled into tests. This resulted in one music test for 4th grade and one for 7th grade, two metric measurement tests for 4th grade and one for 7th grade.* The final metric tests were packaged by American Institutes for Research, Palo Alto, California, while Dr. Robert Sidnell, Michigan State University, directed the formating of the music tests.

Objectives to be included in the tests from the two subject areas were chosen by mathematics and music educators in cooperation with Michigan Department of Education staff (Appendix A). In the case of the music tests, all directions and necessary music were recorded on cassettes. The student responses were also recorded on cassettes for "professional scoring" by music educators. Additional materials required for the testing were a woodblock, autoharp and a card with musical notation, dynamic markings and song lyrics for the fourth grade tests, and for the seventh grade tests a xylophone and cards with musical notation and song lyrics. To administer the metric measurement test items various containers, measuring sticks, mass pieces, cubes and a balance scale were utilized. Students marked their answers to the metric tests in a student booklet which the test administrator transferred to a machine scorable answer sheet.

III. Methods

Sample Selection

All 3,300 schools in the state were categorized by geographical area and community type. This resulted in twelve strata. Four schools were selected randomly from each of the stratum. The total number of schools involved in the project at 4th and 7th grade was 192. Each test was administered to approximately ten students from each selected school.

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*There were also 4th and 7th grade group administered Music and Metric Measurement Tests.

Superintendents, district assessment coordinators, and principals were notified in May of 1976 which schools had been selected for the sample. A reminder letter was sent in August of 1976 which outlined when testing would take place and the responsibilities of the District and School Assessment Coordinators.

Test Administration

The tests (Appendix B) were administered with the cooperation of both the Michigan Council of Teachers of Mathematics and the Michigan Music Educators Association. Test administrators from both organizations volunteered for the projects and were in some cases reimbursed for mileage and other expenses.

Prior to testing, which took place during the regular assessment program testing time of four weeks in the early fall, the test administrators from both professional organizations met for a training session. The session was devoted to: contacting selected schools, sampling within the schools, giving the tests, returning test materials, and dealing with any unusual testing circumstances. An Individual Test Administration Manual for Metric Measurement and Music (Appendix C) was distributed to each test administrator. An Appendix was prepared entitled "Drawing the Sample" which delineated specific instructions for the test administrator on how to draw the sample within each school. In addition, a Test Exception Form (one for each student tested) was provided to record any unusual circumstances, testing situations, or reactions from the students. At the end of the test administration with the school, the principal was asked to fill out a form about her or his reaction to the test administration: specifically, how the principal felt about having an outsider administer the tests. Principals were almost unanimous in their support of the administration procedures since they took the burden from building personnel.

Scoring

The individual metric tests, after the student answers were transferred to the machine scorable answer sheets, were scored by the assessment program's scoring service, Measurement Research Center, Westinghouse Learning Corporation. Final analysis of the results were available in early March. At that time mathematics educators were asked to review the tests and the results for recommendations about program planning and objective revisions.

The individual music tests were to have been scored by music educators within the state. A coordinator of the project from Measurement Research Center met with about a dozen music educators from throughout the state to establish scoring criteria for the various items. Scoring guides were prepared at the scoring service after consensus of the group. Because two conferences to score the tests were thwarted due to bad weather and holiday commitments, the decision was made to train graduate students from a university close to Measurement Research Center. Scoring was completed by mid-March, and the results were reviewed by a group of music educators in June, 1977. A final report with recommendations about programs and objective revisions will be produced in April, 1978.

IV. Results

Test results (Appendix D) for both the Metric Measurement and Music tests were available in April, 1977. Responses from a questionnaire circulated to the metric measurement and music test administrators indicated that the time, effort and expenses were well worth the specific information they gained by testing individual children. Their response, as specialists in these two curriculum areas, is one of hearty support for efforts on the part of the state assessment program to test students with measures other than paper-pencil multiple choice tests and utilize performance and production measures. It is the feeling of the respondents that this kind

of testing augments the information about state and local programs and student skill attainment.

V. Educational Importance

This pioneering effort by a state agency to assess students with performance and production items and in subject areas other than reading and mathematics is significant on several counts: 1) the state agency is demonstrating the importance of curriculum areas other than reading and mathematics exclusively, 2) the state assessment program is moving a step away from the limits of multiple choice instruments, 3) through matrix sampling the state is able to provide valuable program information about educational programs, 4) the state assessment program, with the cooperation of educational specialists, is developing measurement techniques appropriate for use in local school districts.

VI. Future

The experience with this year's program in individual testing has indicated that this mode is a viable method to gather information about the students in a state on a set of objectives that do not lend themselves to paper-pencil testing. The project has proven cost-effective in that for $20,000 the state agency was able to gather information about subjects which would not have been possible without the individually-administered tests. This information will be valuable to local educators and other citizens. As a result there are plans for the following year to assess a state sample of fourth and seventh grade students on some Art and Social Studies objectives.

APPENDIX A

Music Objectives on 4th Grade Individual Test

1. . . . . will be able to play accompaniments on rhythmic classroom instruments . . . . .

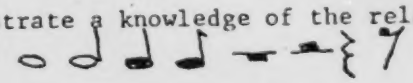
2. . . . . will be able to play accompaniments on harmonic classroom instruments . . . . .

3. . . . . will be able to sing some of the same pitches they have just heard . . . .

4. . . . . will sing a series of tones as an accompaniment to a melody. . .

5. . . . . will sing or play on a classroom instrument, observing the interpretation markings of the music . . . .

6. . . . . will be able to sing one part of a round while the other part(s) is being sung . . . .

7. . . . . will be able to demonstrate a knowledge of the relationships between the following symbols:  . . . .

Music Objectives on 7th Grade Individual Test

1. . . . . will be able to sing a familiar song which harmonizes with another familiar song . . .

2. . . . . will sing one part while others sing the opposite part in a two-part song where both parts are of equal importance . . . .

3. . . . . will sing or play on a classroom instrument, music which is largely stepwise and contains basic rhythms . . . .

Metric Measurement Objectives on 4th Grade Individual Test

Test 1

1. Given a measuring stick scaled in meters only and a distance, the learner will measure the distance to the nearest meter.

2. Given a measuring stick scaled in decimeters only and an object, the learner will measure the length of the object to the nearest decimeter.

3. Given a measuring stick scaled in centimeters only and an object, the learner will measure the length of the object to the nearest centimeter.

4. Given a rectangular region and a set of congruent square shapes, the learner will state the number of square units required to cover the region.

5. Given models that differ in size by at least 50%, the learner will identify the one that is one liter.

6. Given a container with a capacity greater than one liter and a liter unit, the learner will determine experimentally the capacity of the given container to the nearest liter.

7. Given a container less than one liter in capacity and a liter unit, the learner will determine experimentally the capacity of the given container to the nearest liter.

Test 2

1. Given two or more lengths, the learner will: a) choose and state an arbitrary unit of the learner's own choice; b) measure the given lengths using this unit; c) state which is the longest or shortest.

2. Given a box and a supply of cubical blocks, the learner will fill the box to determine its volume.

3. Given a supply of cubical blocks and a picture of a rectangular solid divided into units, the learner will "build" the rectangular solid.

4. Given a mass distinctly different from one kilogram (after handling and carrying a mass of one kilogram), the learner will estimate the mass of the object and then use a balance to check the estimation.

5. Given an object, a supply of equal mass pieces and a balance, the learner will determine the mass of the given object to the nearest metric unit.

Metric Measurement Objectives on 7th Grade Individual Test

Test 1

1. Given a measuring stick scaled in meters and centimeters and an object, the learner will measure the length of the object to the nearest meter or centimeter.

2. Given a length less than or equal to 20 centimeters, the learner will draw a line segment having the length to the nearest centimeter using a rule calibrated in centimeters.

3. Given a millimeter rule and a picture or object, the learner will measure its length to within 3 mm.

4. Given a supply of square decimeter cards (10cm x 10cm) and an area surface (40cm x 30cm or 50cm x 20cm) the learner will estimate the number of units needed to cover the area and measure by covering the given area.

5. Given a rectangular box and the formula for the volume of a rectangular box, the learner will measure the box to the nearest centimeter and will use the formula to compute the volume.

6. Given a container, the learner will measure its capacity to the nearest 10 milliliters(given a graduated measure).

GRADE

4

Experimental Metric Measurement

TEST NUMBER
13

ASSESSMENT ADMINISTRATION

MANUAL

MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

1976 – 77
YEAR 8

Michigan Department of Education

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Part I

This manual describes the preparations to be made prior to testing and procedures for administering the educational assessment instruments. It is essential that you familiarize yourself with both the test and the directions prior to testing.

I. INSTRUCTIONS FOR COMPLETING INDIVIDUAL ANSWER SHEETS

Using a No. 2 pencil, print the name of the school on the top line within the box, the name of the City/District on the second line, and the test number, 13, on the third line. In the upper right hand corner of the answer sheet, blacken in the oval next to number 13. Directions for Scoring and Recording are found on page 7.

II. INSTRUCTIONS FOR COMPLETING STUDENT ASSESSMENT BOOKLET COVER

It will be necessary to identify each student tested with a unique number. The first digit will be the grade level (4 for Grade 4); the next 4 digits will be the state school number, as indicated on the list of schools provided to you prior to testing, and the last two digits will be the number for each student in order of testing.

Example: 4-3285-01. This numeral indicates the grade level (4), the school number (3285), and the student number (01). For each school and grade level you will begin renumbering students. This number should be written on the front of the Student Assessment Booklet.

Then write your assigned number, the School Name, the District Name, the School Number, and the District Number.

III. EXPERIMENTAL METRIC MEASUREMENT TEST EXCEPTION FORM

The Test Exception Report Form, one for each tested student, has been prepared to help you communicate pertinent information about the test. This form is found at the back of each Student Assessment Booklet. Please describe student responses to the testing method (reactions to the materials, willingness to participate in the test situation, comprehension of the directions) and your perceptions of the test (problems with materials, handouts and specific test items). This information is important for interpreting the student responses. Therefore, you must correctly identify each student on the Test Exception Form using the same student number as that on the front of the Student Assessment Booklet. Complete this form after each student has been tested.

PART II

Form 13

I. BEFORE STARTING

A. General instructions: Before administering the test to any student read through this manual and the Student Booklet. Then assemble the materials you will need.

B. Test materials: To administer the test, you will need this manual, a No. 2 pencil, one Answer Sheet, and one Student Booklet, Form 13 for each student to be tested and the following materials, which are contained in the test packet:

Envelope 13
Measuring Stick 1
Measuring Stick 2
Measuring Stick 3
Masking tape
Containers A-G
Bucket of water
Paper towels

C. Test description: The test consists of 15 items which must be administered to one student at a time. The test adminstrator will provide each student with materials and instructions to perform tasks relating to square, linear, and liquid measurement. The students will record their answers in test booklets. The test administrator will evaluate the students' responses and record them on the Answer Sheets enclosed in the test packet.

II. DIRECTIONS FOR ADMINISTRATION

A. Preparing materials:

1. Before you begin testing, assemble the materials listed under I-B above.

2. Cut three strips of masking tape according to the chart below. Measure the strips carefully and cut the ends square. Place them on the floor in an untraveled area. Label each by writing "Line 1," etc., directly on the tape.

Line	Length
1	2m
2	5m
3	7m

3. Set up a large table in an area where water spills will do no harm. On the left end of the table, place three strips of masking tape cut according to the chart on the next page. Measure the strips carefully and cut the ends square. Label each strip. Set Measuring Stick 1 to the left of the strips and Measuring Sticks 2 and 3 to the right.

Line	Length
4	3 dm
5	7 dm
6	8 dm

4. Set up the rest of the table as follows. Place Envelope 13 in the center back: On the right end, place Containers A-G, the bucket of water, and the paper towels.

5. Place 2 chairs at the table. Place this manual and a pencil on the table in front of one chair and a Student Booklet and pencil in front of the other.

A script and specific directions for evaluation and recording are given below. Follow the script and instructions exactly, so that administration of the test will be standardized. When you have read through the test manual and are sure you understand it, select a student and begin.

B. Test script: Read the following script and follow the directions given in parentheses. Observe the students as they take the test to ensure that they are following the directions. Answer procedural questions only. If necessary, you may repeat directions exactly if the student did not understand the first time.

Items 1-3 (Stand by lines 1-3 on floor. Have Measuring Stick 1, a Student Booklet, and a pencil ready.)

SAY: "Today you are going to measure some lines, shapes, and containers of water. Here is a Student Booklet and a pencil. (Hand booklet and pencil to the student.) I am going to ask you to measure some things. You will write your answers in your test booklet.

SAY: "Now we may begin. Look at these three lines on the floor. (Point to lines 1-3.) The lines are labeled 'line 1,' 'line 2,' and 'line 3.' Here is a measuring stick scaled in meters. (Hand stick to student.) Use the measuring stick to measure lines 1, 2, and 3. Open your booklet. Write your answers in the squares on page 1 in your booklet. (Point.) Do you have any questions? (Answer procedural questions.) You may begin. Tell me when you have finished.

Items 4-5 (When the student has finished, ask her/him to return the measuring stick. Move to a spot in front of lines 4-6 at the test table.)

SAY: "Now look at these three lines on the table. (Point to lines 4-6.) The lines are labeled 4, 5, and 6. Here is a measuring stick scaled in decimeters. (Hand Measuring Stick 2 to the student.) Use the measuring stick to measure lines 4, 5, and 6. Write your answers in the squares on page 1 in your booklet. Tell me when you have finished.

ITEMS 7-9 (When the student has finished, replace Measuring Stick 2. Seat the student beside you at the table.)

SAY: "Now look at page 2. (Pause.) Look at the three lines on the page. (Point.) Here is a measuring stick scaled in centimeters. (Hand Measuring Stick 3 to the student.) Use the measuring stick to measure lines 7, 8, and 9. Write your answers in the squares. Tell me when you have finished.

ITEM 10 (Replace Measuring Stick 3. Empty the contents of Envelope 13 in front of the student.)

SAY: "Turn to page 3. This is Region A. (Point.) I want you to measure Region A using these square units. (Point.) See how many square units are needed to cover Region A. Write your answer in the square in your booklet. Tell me when you have finished.

ITEM 11

SAY: "Now look at page 4. (Pause.) There is Region B. (Point.) Use the square units to measure Region B. See how many square units are needed to cover Region B. Write your answer in the square in your booklet. Tell me when you have finished.

ITEM 12 (Replace the square units in Envelope 13. Stand up. Move to spot at right end of table.)

SAY: "Now I'd like to have you measure water using these containers. First, turn to page 5 in your booklet. (Pause.) Now, look at Container A and Container B. (Point.) Which container holds 1 liter of water? Is it Container A or Container B? Write your answer in the square beside number 12 in your booklet. (Pause.)

ITEM 13

SAY: "Now look at Container C and Container D. (Point.) Which container holds 1 liter of water? Write your answer in the square beside number 13 in your booklet. (Pause.)

ITEM 14

SAY: "Now I want you to measure Container E. (Point.) Use this 1-liter measure (hand Container G to the student) and the water in this bucket. (Point.) Fill Container E to the line near the top. (Point.) Count the number of liters of water that are needed to fill Container E. Write your answer in the square beside number 14. (Pause until finished.) Good, now pour the water back into the bucket.

ITEM 15

SAY: "Now use Container F to fill this 1 liter measure with water from the bucket. (Hand liter measure and Container F to student.) Again, fill each container to the level near the top. Count the number of times you have to fill Container F to the line to get 1 liter. Write your answe in the box beside Item 15. (Pause.) Now pour the water back into the bucket. (Pause.) The test is over now. Thank you very much." (Dismiss student. Call next student to be tested. Follow above procedures until all selected students, or alternates, have been tested.)

DIRECTIONS FOR SCORING AND RECORDING

Evaluate each student's responses using the Scoring Chart below. Find the student's response to each item under Columns A, B. C, or D. For each item, fill in the oval on the student's machine-scored answer sheet that corresponds to the letter above the response.

SCORING CHART

Student Responses

Item	A	B	C	D
1	1	2	3	any other response
2	4	5	6	any other response
3	6	7	8	any other response
4	2	3	4	any other response
5	6	7	8	any other response
6	7	8	9	any other response
7	8	9	10	any other response
8	3	4	5	any other response
9	12	13	14	any other response
10	6-8	9	10-12	any other response
11	10-14	15	16-20	any other response
12	A	B	blank	any other response
13	any other response	blank	C	D
14	1	2	3	any other response
15	9	10	11	any other response

III. CHECKING AND RETURNING OF ANSWER SHEETS AND TEST BOOKLETS

1. Check to be sure you have recorded a response on the Answer Sheets for all test items. When you have completed testing all the students in an assigned school, and have recorded all of their responses, check over the Answer Sheets once again. Make sure the ovals are filled in completely and that there are no stray marks on the Answer Sheet. Also make sure you have filled in the oval next to 13 under the Test Number Column.

2. Bind the used answer sheets together with a paper bnad. (A paper band is a long piece of paper wrapped around the answer sheets and fastened at the top with tape.) Do not use string, rubber bands or tape to secure the sheets as these may tear the materials.

3. Place the used Answer Sheets, Student Assessment Booklets and the Test Exception Form in the provided envelope and mail it to the address indicated.

4. The unused materials should be returned to the person indicated during the Training Session.

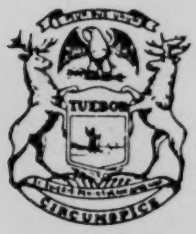
GRADE

4

TEST NUMBER
13

STUDENT ASSESSMENT BOOKLET

Individual Metric Measurement



MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

1976 – 77
YEAR 8

Student Number _____
Test Administrator Number _____
School Name _____
District Name _____

School No. _____
District No. _____

Michigan Department of Education

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DIRECTIONS: MEASURE THE LINES. WRITE YOUR ANSWERS IN THE SQUARES.

1. LINE 1 IS ☐ m LONG.

2. LINE 2 IS ☐ m LONG.

3. LINE 3 IS ☐ m LONG.

4. LINE 4 IS ☐ dm LONG.

5. LINE 5 IS ☐ dm LONG.

6. LINE 6 IS ☐ dm LONG.

DIRECTIONS: MEASURE THE LINES BELOW. USE A MEASURING STICK SCALED IN CENTIMETERS. WRITE YOUR ANSWERS IN THE SQUARES.

7. _____

LINE 7 IS ☐ cm LONG.

8. _____

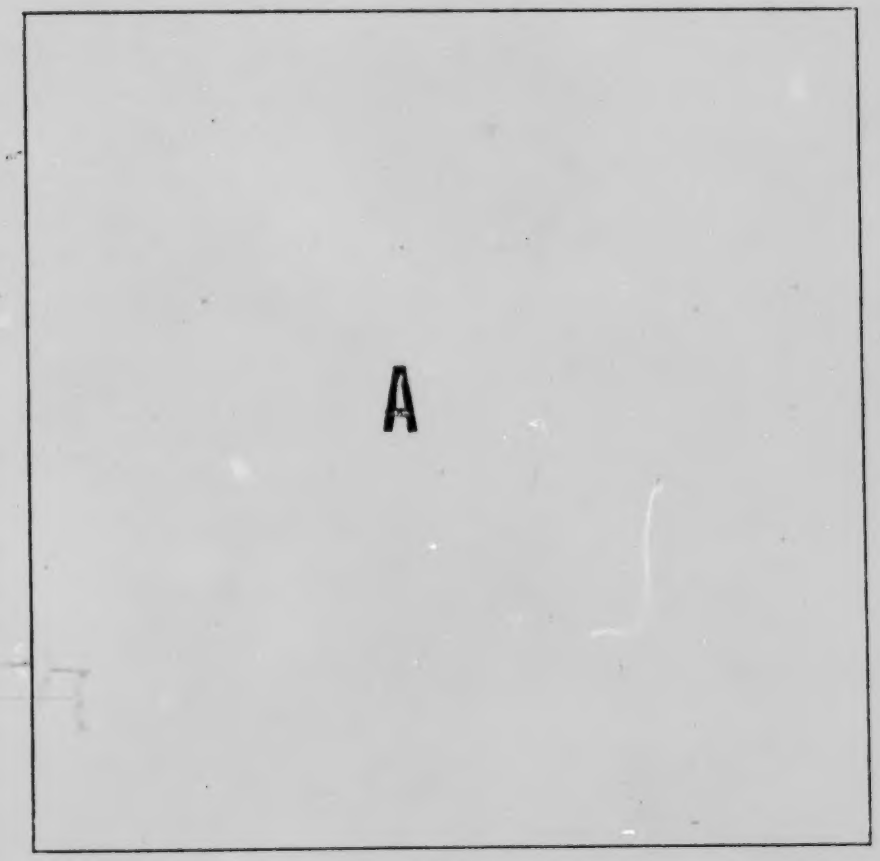
LINE 8 IS ☐ cm LONG.

9. _____

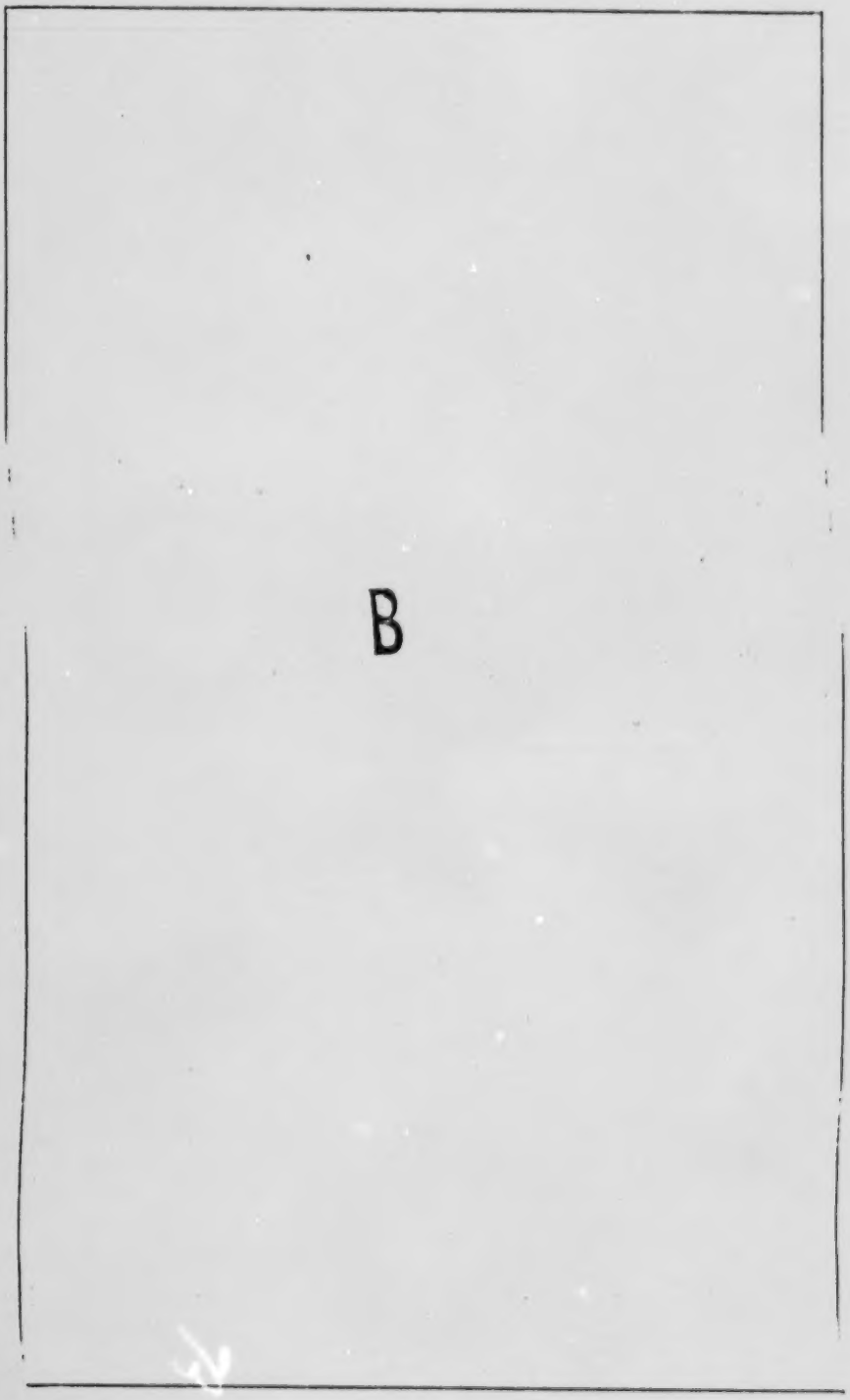
LINE 9 IS ☐ cm LONG.

DIRECTIONS: COVER REGIONS A AND B WITH THE SQUARE UNITS. COUNT THE NUMBER OF SQUARE UNITS THAT YOU NEED. WRITE YOUR ANSWERS IN THE SQUARES.

10. ☐ SQUARE UNITS ARE NEEDED TO COVER REGION A.



11. ☐ SQUARE UNITS ARE NEEDED TO COVER REGION B.



12. CONTAINER ☐ HOLDS 1 LITER.

13. CONTAINER ☐ .HOLDS 1 LITER.

14. CONTAINER E HOLDS ☐ LITERS.

15. THE 1-LITER MEASURE HOLDS ☐ CONTAINERS F.

STOP.

Student Name_____

Test Administrator Number_____

School Name_____

School Number_____

District Name_____

District Number_____

MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

TEST EXCEPTION REPORT

This form should be used to record exceptions to good testing procedures which may occur while the individual Michigan Educational Assessment Program tests are being administered. Pertinent information about irregular administration conditions and undesirable student reactions should be noted. Where appropriate also note the section(s) of the test which were adversely affected.

Please record specific observations in the appropriate spaces below. (Use the back of this form if necessary.)

I. Adverse Physical Conditions (Room conditions, seating, lighting, distractions, etc.)

II. Inappropriate Reaction to Testing (Unfavorable student attitude, difficulty in understanding or executing directions, timing, etc.)

III. Unfavorable Individual Student Behavior (Emotional stress, illness, unfair assistance, uncooperative attitude, etc.)

IV. Mechanical Difficulties (Any difficulties in using handouts or materials that may have affected the results.)

GRADE 4

Experimental Metric Measurement

TEST NUMBER 14

ASSESSMENT ADMINISTRATION

MANUAL

MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

1976 – 77
YEAR 8

Michigan Department of Education

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Using a No. 2 pencil, print the name of the school on the top line within the box, the name of the City/District on the second line, and the test number, 14, on the third line. In the upper right hand corner of the answer sheet, blacken in the oval next to number 14. Directions for Scoring and Recording are found on page 8.

II. INSTRUCTIONS FOR COMPLETING STUDENT ASSESSMENT BOOKLET COVER

It will be necessary to identify each student tested with a unique number. The first digit will be the grade level (4 for Grade 4); the next 4 digits will be the state school number, as indicated on the list of schools provided to you prior to testing, and the last two digits will be the number for each student in order of testing.

Example: 4-3285-01. This numeral indicates the grade level (4), the school number (3285), and the student number (01). For each school and grade level you will begin renumbering students. This number should be written on the front of the Student Assessment Booklet.

Then write your assigned number, the School Name, the District Name, the School Number, and the District Number.

III. EXPERIMENTAL METRIC MEASUREMENT TEST EXCEPTION FORM

The Test Exception Report Form, one for each tested student, has been prepared to help you communicate pertinent information about the test. This form is found at the back of each Student Assessment Booklet. Please describe student responses to the testing method (reactions to the materials, willingness to participate in the test situation, comprehension of the directions) and your perceptions of the test (problems with materials, handouts and specific test items). This information is important for interpreting the student responses. Therefore, you must correctly identify each student on the Test Exception Form using the same student number as that on the front of the Student Assessment Booklet. Complete this form after each student has been tested.

PART II

Form 14

I. BEFORE STARTING

A. General instructions: Before administering the test to any student, read through this manual and the Student Booklet, and assemble the materials you will need.

B. Test materials: To administer the test, you will need this manual, a No. 2 pencil, one Answer Sheet, and one Student Booklet, Form 14, for each student, and the following materials, which are contained in the test packet:

Rubber eraser
Container I
Container J
Set of 60-$(2\ cm)^3$ cubic units in unmarked box
Mass Piece A
Mass Piece B
Mass Piece C
Set of 4 - 1 kg mass pieces
Set of 10 - 1 g mass pieces
Balance

C. Test description: The test consists of 13 items which must be administered to one student at a time. The test administration will provide each student with materials and instructions to perform tasks relating to linear, cubic, and mass measurement. The students will record their answers in test booklets. The test administrator will evaluate the students' responses and record them on the answer sheets enclosed in the test packet.

II. DIRECTIONS FOR ADMINISTRATION

A. Preparing materials

1. Before you begin testing, assemble the materials list under I-B above.

2. Place the materials on a large table in the following order (left to right): eraser, Container I, Container J, the box of cubic units, Mass Piece A, set of 1 kg mass pieces, the balance, Mass Piece B, Mass Piece C, set of 1 g mass pieces.

3. Place 2 chairs at the table. Place this manual and a pencil on the table in front of one chair, and a Student Booklet and pencil in front of the other.

A script and specific directions for evaluation and recording are given below. Follow the script and instructions exactly, so that the administration of the test will be standarized. When you have read through the test manual and are sure that you understand it, select a student and begin.

B. Test script: Have the student sit beside you at the test table. Read the script and follow the directions given in parentheses. Observe the students as they take the test to ensure that they are following the directions. Answer procedural questions only.

SAY: "Today you are going to take a test on measurement. Here is a Student Booklet and a pencil. (Hand booklet and pencil to the student.) I am going to ask you to measure some things for me. You will write your answers in your test booklet.

ITEMS 1-4

SAY: "Now open your booklet to page 1. There are four lines on this page. (Point.) I want you to use this eraser (hand eraser to student) to measure the lines. See how many erasers long each line is. Measure one line at a time and write your answers in the square below the line (point to answer squares). Do you have any questions? (Answer procedural questions.) Okay, you may begin. When you have finished, give the eraser back to me." (Pause until student completes Items 1-4. Set the eraser aside.)

ITEM 5

SAY: "Good. Now look at the lines on page 1. Which line is the longest? Write the number which is next to the longest line in the top square on page 2 (point). Find the longest line. Write your answer in the square." (Pause.)

ITEM 6

SAY: "Fine. Now look at the lines on page 1 again. Which line is the shortest? Write the number of the shortest line in the second square (point). Find the shortest line. Write your answer in the square." (Pause.)

ITEM 7

SAY: "Okay, now you will measure these boxes (point to Containers I and J) using these cubes (point to cubes). Measure Box I first. (Hand Container I to student.) See how many cubes fit in Box I to the line. Fill the box to the top. Write your answer in this square (point). When you have finished, put the cubes back in their box." (Pause. When student has finished, replace Container I.)

ITEM 8

SAY: "Good, now measure Box J. (Hand Container J to the student.) See how many cubes fit in Box J to the line. Write your answer in the square (point). When you have finished, put the cubes back in their box." (Pause. When student has finished, replace Container J.)

ITEM 9

SAY: "Fine. Now look at the shape in the drawing in your booklet (point.) Use the blocks to build a shape just like the one in the drawing. Tell me when you have finished." (Pause. When the student has finished, examine the rectangular solid. If it has the correct number and

arrangement of blocks, write a "P" in the square for Item 9; if either the number or arrangement of blocks is incorrect, write "N" in the square.)

(Replace the blocks in their box and set them aside. Place Mass Piece A and a 1 kg mass piece in front of the student.)

ITEM 10

SAY: "Okay, now you will work with these mass pieces (point). Pick up this mass piece (point to the labeled mass piece) and hold it in one hand. It has a mass of one kilogram. Now pick up this mass piece (point to Mass Piece A) and hold it in your other hand. If this mass piece (point to the 1 kg mass piece) has a mass of one kilogram, what is the mass of this (point to Mass Piece A) mass piece? Is it 1, 2, or 4 kilograms? Is the mass of this mass piece (Mass Piece A) 1, 2, or 4 kilograms?" (Pause. Record student's answer by placing an "X" in the corresponding answer square in the Student Booklet. If the student seems to be having difficulty understanding the task, you may repeat the entire procedure once.)

ITEM 11

SAY: "Good. Now I want you to find the mass of this mass piece (point to Mass Piece A). Use the balance (point) and these one kilogram mass pieces (point). Find the mass of Mass Piece A. Write your answer in this square (point). Tell me when you have finished." (Pause. When the student has finished, set aside Mass Piece A and the 1 kg mass pieces. Place Mass Piece B and the 1 g mass pieces in front of the student.)

ITEM 12

SAY: "Now find the mass of this mass piece (point to Mass Piece B). Use the balance and these one gram mass pieces (point). Write your answer in the square (point). Tell me when you have finished." (Pause. When student has finished, set aside Mass Piece B and place Mass Piece C in front of the student.)

ITEM 13

SAY: "This is the last one. Find the mass of this mass piece (point to Mass Piece C). Use the balance and the one gram mass pieces. Write your answer in the last square. Tell me when you have finished." (Pause. When student has finished, replace the materials. Then thank and dismiss the student. Repeat above procedures untill all selected students, or alternates, have been tested.)

DIRECTIONS FOR SCORING AND RECORDING

Evaluate each student's responses using the Scoring Chart below. Find the student's response to each item under Columns A, B. C, or D. For each item, fill in the oval on the student's answer sheet that corresponds to the letter above the response.

SCORING CHART

	Student Responses			
Item	A	B	C	D
1	2	3	4	any other response
2	1	2	3	any other response
3	0	1	2	any other response
4	3	4	5	any other response
5	1	2	3	4
6	1	2	3	4
7	40-46	47-49	50-56	any other response
8	24-26	27	28-30	any other response
9	P	N		
10	1 kg	2 kg	4 kg	blank
11	1	2	3	any other response
12	0	1-2	3-4	any other response
13	1-3	4-6	7-9	any other response

III. CHECKING AND RETURNING OF ANSWER SHEETS AND TEST BOOKLETS

1. Check to be sure you have recorded a response on the Answer Sheets for all test items. When you have completed testing all the students in an assigned school, and have recorded all of their responses, check over the Answer Sheets once again. Make sure the ovals are filled in completely and that there are no stray marks on the Answer Sheet. Also make sure you have filled in the oval next to 14 under the Test Number Column.

2. Bind the used answer sheets together with a paper band. (A paper band is a long piece of paper wrapped around the answer sheets and fastened at the top with tape.) Do not use string, rubber bands or tape to secure the sheets as these may tear the materials.

3. Place the used Answer Sheets, Student Assessment Booklets and the Test Exception Form in the provided envelope and mail it to the address indicated.

4. The unused materials should be returned to the person indicated during the Training Session.

GRADE

4

TEST NUMBER
14

STUDENT ASSESSMENT BOOKLET

Individual Metric Measurement

MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

1976 – 77
YEAR 8

Student Number _____
Test Administrator Number _____
School Name _____
District Name _____

School No. _____
District No. _____

Michigan Department of Education

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DIRECTIONS: How many erasers long is each line? Write your answers in the squares.

1. _____

Line 1 is ☐ erasers long.

2. _____

Line 2 is ☐ erasers long.

3. _____

Line 3 is ☐ erasers long.

4. _____

Line 4 is ☐ erasers long.

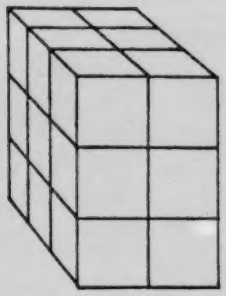
5. WHICH LINE IS THE LONGEST? ☐

6. WHICH LINE IS THE SHORTEST? ☐

7. BOX I HOLDS ☐ CUBES.

8. BOX J HOLDS ☐ CUBES.

9. BUILD THE SHAPE. ☐



10. The estimated mass of Mass Piece A is

- ☐ 1 kg
- ☐ 2 kg
- ☐ 4 kg

11. The mass of Mass Piece A is ☐ kg.

12. The mass of Mass Piece B is ☐ g.

13. The mass of Mass Piece C is ☐ g.

GRADE 7

Experimental Metric Measurement

TEST NUMBER 28

ASSESSMENT ADMINISTRATION MANUAL

MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

1976 – 77
YEAR 8

Michigan Department of Education

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Part I

This manual describes the preparations to be made prior to testing and procedures for administering the educational assessment instruments. It is essential that you familiarize yourself with both the test and the directions prior to testing.

I. INSTRUCTIONS FOR COMPLETING INDIVIDUAL ANSWER SHEETS

Using a No. 2 pencil, print the name of the school on the top line within the box, the name of the City/District on the second line, and the test number, 28, on the third line. In the upper right hand corner of the answer sheet, blacken in the oval next to number 28. Directions for Scoring and Recording are found on page 8.

II. INSTRUCTIONS FOR COMPLETING STUDENT ASSESSMENT BOOKLET COVER

It will be necessary to identify each student tested with a unique number. The first digit will be the grade level (7 for Grade 7); the next 4 digits will be the state school number, as indicated on the list of schools provided to you prior to testing, and the last two digits will be the number for each student in order of testing.

Example: 7-3285-01. This numeral indicates the grade level (7), the school number (3285), and the student number (01). For each school and grade level you will begin renumbering students. This number should be written on the front of the Student Assessment Booklet.

Then write your assigned number, the School Name, the District Name, the School Number, and the District Number.

III. EXPERIMENTAL METRIC MEASUREMENT TEST EXCEPTION FORM

The Test Exception Report Form, one for each tested student, has been prepared to help you communicate pertinent information about the test. This form is found at the back of each Student Assessment Booklet. Please describe student responses to the testing method (reactions to the materials, willingness to participate in the test situation, comprehension of the directions) and your perceptions of the test (problems with materials, handouts and specific test items). This information is important for interpreting the student responses. Therefore, you must correctly identify each student on the Test Exception Form using the same student number as that on the front of the Student Assessment Booklet. Complete this form after each student has been tested.

PART II

FORM 28

I. BEFORE STARTING

A. General instructions: Before administering the test to any student, read through this manual and the Student Booklet and assemble the materials that you will need.

B. Test materials: To administer the test, you will need this manual, a No. 2 pencil, and one answer sheet and one Student Booklet, Form 28, for each student. You will also need the following materials from the test packet:

masking tape
Measuring Stick 4
Measuring Stick 5
Envelope 28
Region X
Region Y
Set of cubic units in unmarked box
Container H
Container I
Container J
bucket of water
paper towels

C. Test description: The test consists of 18 items which must be administered to one student at a time. The test administrator will provide each student with materials and instructions to perform tasks relating to linear, square, cubic, and liquid measurement. The students will record their answers in test booklets. The test administrator will evaluate the students' responses and record them on the answer sheets enclosed in the test packet.

II. DIRECTIONS FOR ADMINISTRATION

A. Preparing materials:

1. Before you begin testing, assemble the materials listed under I-B above.

2. Remove 40 cubic units from the set and put them aside. Twenty cubic units should remain in the unmarked box.

3. Cut 2 strips of masking tape, 2 m and 5 m long. Be sure to measure the strips exactly and cut the ends square. Place the strips on the floor in an untraveled area. Label the strips by writing on the tape. Label the 2 m strip "Line 1" and the 5 m strip "Line 2."

4. Place the remaining materials on a large table in the following order (left to right): Measuring Sticks 4 and 5, Envelope 28, Regions X and Y, Set of cubic units, Containers I and J, Container H, bucket of water, paper towels.

5. Place 2 chairs at the table. Place this manual and a pencil on the table in front of one chair and a Student Booklet and pencil in front of the other.

A script and specific directions for evaluation and recording are given below. Follow the script and instructions exactly, so that administration of the test will be standardized. When you have read through the test manual and are sure that you understand it, select a student and begin.

B. Test script: Have the student sit beside you at the test table. Read the script and follow the directions given in parentheses. Observe the students as they take the test to ensure that they are following the directions. Answer procedural questions only.

SAY: "Today you are going to measure some lines, shapes, boxes, and containers of water. Here is a Student Booklet and a pencil. (Hand a booklet and pencil to the student.) I am going to ask you to measure some things. You will write your answers in your test booklet.

ITEMS 1 & 2

SAY: "Let's begin. Turn to page 1 in your test booklet. You will start by measuring these two lines on the floor. (Point to strips of tape on the floor.) Here is a measuring stick scaled in meters and centimeters. (Hand Measuring Stick 5 to the student.) The lines are marked 'Line 1' and 'Line 2.' Measure each line using the measuring stick. Write your answers in the squares beside numbers 1 and 2 in your booklet. When you have finished, give the measuring stick to me. (Pause while student completes Items 1 and 2.)

ITEMS 3 & 4

(Replace Measuring Stick 5 and pick up Measuring Stick 4.)

SAY: "Here is a measuring stick scaled in centimeters and millimeters. (Hand Measuring Stick 4 to the student.) Use it to measure the two lines beside numbers 3 and 4 in your booklet. Write your answers in the squares below the lines. (Pause.)

ITMES 5 & 6

SAY: "Now turn to page 2 in your booklet. (Pause.) The directions at the top say: 'Draw the lines in the spaces provided.' Use the measuring stick to draw a line 11 cm long here (point) and a line 4 cm long here (point). Tell me when you when you have finished."

ITEMS 7 & 8

SAY: "Now use the measuring stick to measure the two lines beside numbers 7 and 8. Write your answers in the squares below the lines. When you have finished, return the measuring stick to me." (Pause.)

ITEM 9

(Replace Measuring Stick 4 and empty the contents of Envelope 28 onto the table.)

SAY: "Now you're going to do something different. From now on, I'm going to ask you some questions and then write your answers in your booklet for you." (Take Student Booklet and turn to page 3. Place Region X in front of the student. Pick up one dm^2 card and hold it where the student can see it.)

SAY: "This is a square decimeter. Look at the square decimeter and at Region X (point). How many square decimeters do you think are needed to cover Region X?" (Pause. Record student's response beside Item 9 in the Student Booklet.)

ITEM 10 (Replace Region X and place Region Y in front of the student. Hold up the dm^2 card once again.)

SAY: "Now look at Region Y. How many square decimeters do you think are needed to cover Region Y?" (Pause. Record response in square beside Item 10.)

ITEM 11 (Replace Region Y and place Region X in front of the student once again.)

SAY: "Fine. Now here is a set of square decimeters. (Hand full set of square decimeters to student.) Use the square decimeters to cover Region X. Tell me how many square decimeters are needed to cover Region X." (Pause. Record response.)

ITEM 12 (Replace Region X and place Region Y in front of the student.)

SAY: "Now cover Region Y with the square decimeters. Tell me how many square decimeters are needed to cover Region Y." (Pause. Record response.)

ITEM 13 (Replace Region Y and put the dm^2 cards back in Envelope 28. Place container I in front of the student.)

SAY: "Now you're going to measure two containers. This is Container I (point). (Place one cubic unit next to Container I.) This is a cubic unit (point). Look at the cubic unit and at Container I. How many cubic units do you think are needed to fill Container I to the line?" (Pause. Do not allow the student to pick up the cubic unit. Record response)

ITEM 14 (Replace Container I and place Container J in front of the student. Place the cubic unit next to Container J.)

SAY: "Now look at Container J. How many cubic units do you think are needed to fill Container J to the line?" (Pause. Record response.)

ITEM 15 (Replace Container J and place Container I in front of the student once again. Replace the cubic unit in the box of units and place them in front of the student.)

SAY: "Now here is a box of cubic units. Use these cubic units to determine how many cubic units Container I will hold. Tell me how many cubic units will fit inside Container I to the line. (Pause. Record response.) Now return the cubic units to their box."

ITEM 16 (Replace Container I and place Container J in front of the student.)

SAY: "Now use the cubic units to determine how many cubic units Container J will hold. Tell me how many cubic units will fit inside Container J. (Pause. Record response.) Return the cubic units to their box."

ITEM 17 (Replace Container J and the box of cubic units. Place Containers I and H in front of the student.)

SAY: "Now you're going to measure with water. Here is Container I once again (point) and here is a 100 mℓ measure (point). First, fill Container I to the line with water from the bucket. (Pause. Check

to be sure that Container I is filled exactly to the line.) Now find out how many milliliters of water are in Container I. Pour the water out of Container I into the 100 mℓ measure and then back into the bucket. You will have to pour more than once. When you have finished, tell me how many milliliters of water were in Container I." (Pause. Record response.)

ITEM 18

(Replace Container I and place Container J in front of the student.)

SAY: "Here is Container J. Fill it with water to the line. (Pause. Check.) Now find out how many milliliters of water are in Container J. When you have finished, tell me your answer." (Pause. Record response.)

SAY: "The test is finished. Thank you very much." (Dismiss the student. Replace Containers J and H. Repeat above procedures until all selected students, or alternates, have been tested.)

DIRECTIONS FOR SCORING AND RECORDING

Evaluate each student's responses using the Scoring Chart below. Find the student's response to each item under Columns A, B. C, or D. For each item, fill in the oval on the student's answer sheet that corresponds to the letter above the response.

SCORING CHART

	Student Responses			
Item	A	B	C	D
1	1	2	3	any other response*
2	4	5	6	any other response
3	7-8	9	10-11	any other response
4	2-3	4	5-6	any other response
5	9.4-10.4 cm	10.5-11.5 cm	11.6-12.6 cm	any other response
6	2.4-3.4 cm	3.5-4.5 cm	4.6-5.6 cm	any other response
7	6-8	9-15	16-18	any other response
8	27-30	31-37	38-40	any other response
9	7-9	10-14	15-17	any other response
10	5-7	8-12	13-15	any other response
11	11	12	13	any other response
12	9	10	11	any other response
13	35-42	43-53	54-60	any other response
14	19-23	24-30	31-35	any other response
15	41-46	47-49	50-55	any other response
16	23-25	26-28	29-31	any other response
17	~~169-179~~ 365-374	~~180-200~~ 375-395	~~201-211~~ 396-405	any other response
18	~~89-99~~ 195-204	~~100-120~~ 205-225	~~121-131~~ 226-235	any other response

*Any other response includes no response or blank.

III. CHECKING AND RETURNING OF ANSWER SHEETS AND TEST BOOKLETS

1. Check to be sure you have recorded a response on the Answer Sheets for all test items. When you have completed testing all the students in an assigned school, and have recorded all of their responses, check over the Answer Sheets once again. Make sure the ovals are filled in completely and that there are no stray marks on the Answer Sheet. Also make sure you have filled in the oval next to 28 under the Test Number Column.

2. Bind the used answer sheets together with a paper band. (A paper band is a long piece of paper wrapped around the answer sheets and fastened at the top with tape.) Do not use string, rubber bands or tape to secure the sheets as these may tear the materials.

3. Place the used Answer Sheets, Student Assessment Booklets and the Test Exception Form in the provided envelope and mail it to the address indicated.

4. The unused materials should be returned to the person indicated during the Training Session.

GRADE

7

TEST NUMBER
28

STUDENT ASSESSMENT BOOKLET

Individual Metric Measurement

MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

1976 – 77
YEAR 8

Student Number _____
Test Administrator Number _____
School Name _____
District Name _____

School No. _____
District No. _____

Michigan Department of Education

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DIRECTIONS: MEASURE THE TAPE LINES TO THE NEAREST METER. WRITE YOUR ANSWERS IN THE SQUARES.

1. LINE 1 IS ☐ m LONG.

2. LINE 2 IS ☐ m LONG.

DIRECTIONS: MEASURE THE LINES TO THE NEAREST CENTIMETER. WRITE YOUR ANSWERS IN THE SQUARES.

3. _____

LINE 3 IS ☐ cm LONG.

4. _____

LINE 4 IS ☐ cm LONG.

DIRECTIONS: DRAW THE LINES IN THE SPACES PROVIDED.

5. DRAW A LINE 11 cm LONG.

6. DRAW A LINE 4 cm LONG.

DIRECTIONS: MEASURE THE LINES TO THE NEAREST MILLIMETER. WRITE YOUR ANSWERS IN THE SQUARES.

7. ——

LINE 7 IS ☐ mm LONG.

8. ————————

LINE 8 IS ☐ mm LONG.

9. ☐ ESTIMATED dm^2 IN REGION X.

10. ☐ ESTIMATED dm^2 IN REGION Y.

11. ☐ dm^2 IN REGION X.

12. ☐ dm^2 IN REGION Y.

13. ☐ ESTIMATED CUBIC UNITS IN CONTAINER I.

14. ☐ ESTIMATED CUBIC UNITS IN CONTAINER J.

15. ☐ CUBIC UNITS IN CONTAINER I.

16. ☐ CUBIC UNITS IN CONTAINER J.

17. ☐ $m\ell$ IN CONTAINER I.

18. ☐ $m\ell$ IN CONTAINER J.

GRADE

4

Experimental Individual Music Test

TEST NUMBER

32

ASSESSMENT ADMINISTRATION

MANUAL

MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

1976 – 77
YEAR 8

Michigan Department of Education

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4th GRADE ADMINISTRATION MANUAL

INDIVIDUALLY ADMINISTERED MUSIC TEST #32

I. Before Starting Testing

A. INTRODUCTION

This manual describes the preparations to be made prior to testing and procedures for administering the educational assessment instruments. It is essential that you familiarize yourself with both the test and the directions prior to testing.

B. MATERIALS NEEDED FOR TEST ADMINISTRATION

The following materials should be assembled prior to the test administration:

Assessment Administration Manual
Two cassette tape recorders
One pre-recorded cassette tape labeled 32
One blank student response tape for each student to be tested
A woodblock
An autoharp
A card (enclosed) with musical notation, dynamic markings and song lyrics
A Test Exception Report Form

Play each pre-recorded cassette tape to make sure the recorded material is complete. This can be checked with the script found under II, Directions for Test Administration. Check that the two tape recorders are working and that the autoharp is tuned.

It will be necessary to identify each student with a unique number. The first digit will be the grade level (4 for Grade 4); the next 4 digits will be the state school number, as indicated on the list of schools provided to you prior to testing, and the last two digits will be the number for each student in order of testing.

Example: 4-3285-01. This numeral indicates the grade level (4), the school number (3285), and the student number (01). For each school and grade level you will begin renumbering students.

This number should be written on the response tape before the test administration. Use only one response tape for each student. It might be necessary to use both sides of the tape.

Before starting a test administration, record on the response tape, "This is student number _____" which will be the same number written on the blank response tape.

The Test Exception Report Form, one for each tested student, has been prepared to help you communicate pertinent information about the test. Please describe student responses to the testing method (reactions to the cassette materials, willingness to participate in the test situation, comprehension of the recorded material) and your perceptions of the test (mechanical difficulties, problems with materials, handouts and specific test items). This information is important for interpreting the recorded student responses. Therefore you must correctly identify each student on the Test Exception Report Form using the same student number given on the tape. Complete the form after each student has been tested.

II. Directions for Test Administration

You should allow about 30 minutes to test each student. This individually-administered test is to be administered to one student at a time. Testing should take place in a quiet room free from interruptions and noise. Arrange your materials for testing, preferably at a small table so student and examiner may sit opposite each other.

When you and the selected student are comfortably seated at a testing table, and the blank response tape properly labeled with the unique student number and this number recorded on the tape, proceed. If it is necessary to use both sides of the student response tape, label the end of the tape "Continued on Side 2" and the second side, "Side 2." Directions for the student are in quotations. Directions for the test administrator are in parentheses.

Directions to the Student

It is very important that the student feel comfortable with the tape recorder. It may be necessary to allow a few minutes for the student to experiment with the machines.

SAY: "I don't know if you have ever recorded anything on a cassette before, but I'd like you to record something on the cassette to hear your voice." (Allow the student to record something and play it back if he or she wishes.)

SAY: "The tape is going to ask you to participate in some musical activities. I will tape your answers on this tape. Be sure to listen carefully. Are you ready?" (When student indicates he or she is ready, turn on the student response tape and leave it on for the entire test.)

NOTE: From this point, the test items and directions are given on the pre-recorded tape. At the BEEP, the test administrator is asked to stop the pre-recorded tape. The tape script appears in boxes below.

(Hand the student the woodblock and turn on the pre-recorded cassette.)

ITEM 1
You are going to hear the song Four in a Boat. Then you will hear an accompaniment pattern that you will be asked to play on the woodblock. Listen to the song. Here is the accompaniment pattern that you will play. Take the woodblock and play along with the tape. one - two - ready - play. Listen to the song and the accompaniment together.

Now you play the accompaniment on the woodblock while the tape plays the song. One - two - ready - play.

BEEP (Turn off the pre-recorded cassette tape.)

ITEM 2
(Hand the student the autoharp)

SAY: "This is Item 2. Find the G chord on the autoharp. If you cannot find it, I will help you." (If necessary, help the student find the G chord. Turn on pre-recorded tape.)

While the voice sings Scotland's Burning, you strum along using the G chord. Start playing when the voice on the tape says ready play. Keep playing until the song is over. Here is the tempo ... One - two - ready - play.

BEEP (Turn off pre-recorded cassette)

SAY: "Very good! Hand me the autoharp."

(Turn on the pre-recorded tape.)

ITEM 3
You will hear some tones. You are to repeat the tones by singing LOO. Listen to these tones. Now, you repeat those tones. Ready sing.

ITEM 4
Listen to these tones. Now, you repeat those tones. Ready sing.

ITEM 5
Listen to these tones. Now, you repeat those tones. Ready Sing.

ITEM 6
Listen to the song, Row, Row, Row Your Boat. Now listen to the accompaniment that goes with the song. You will be asked to sing this accompaniment later so listen carefully. Sing the accompaniment with the tape this time. Here is your starting pitch. LOO One - two - ready - sing. Now listen to the song and accompaniment together.

You sing the accompaniment while the tape sings the song. Here is your starting pitch. LOO One - two - ready - sing.

ITEM 7
Listen to how to clap softly and then loudly. Now you clap softly, then loudly, then softly, then loudly as you just heard.

(Give the student the card with the musical notation)

Look at the card with the musical notation on it. You are to clap slowly, once for every note and do what the dynamic markings tell you to do. Look over the notation. You may practice. Tell the test examiner when you are ready to clap the example.

BEEP (Turn off pre-recorded cassette. When the student has responded turn on the pre-recorded tape. Give the student the card with the words to the song Are You Sleeping.)

ITEM 8
You will hear the song Are You Sleeping. The words are on the card. You will hear the same song sung as a two-part round. You will then be asked to sing the second part of the round while the voice on the tape sings the first part. Listen carefully. Here is the song Are You Sleeping. Here is the song sung as a two-part round.

The voice on the tape will start the round and you start singing at the correct time.

(Upon completion of ITEM 8 collect the card from the student)

ITEM 9
You will now do some clapping. Listen carefully for directions. I will clap four half notes. You clap quarter notes. One - two - ready - begin.

ITEM 10
Now I will clap four whole notes. You clap quarter notes. One - two - ready - begin.

SAY: "The test is over. Thank you for participating."

(Turn off both tapes. Rewind both the pre-recorded cassette tape and the student response tape. Make sure the student response tape is labeled correctly.

Before administering the test to the next student, select a blank student response tape, label it; and record ... "This is Student # ___" on the student response tape.)

III. Directions for Returning Test Materials

When you have completed all test administrations at a selected school place the labeled student response tapes and the completed Test Exception Report Forms in the provided envelope and mail to the address indicated on the envelope.

GRADE

7

Experimental Individual Music Test

TEST NUMBER

43

ASSESSMENT ADMINISTRATION

MANUAL

MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

1976 – 77

YEAR 8

Michigan Department of Education

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7th GRADE ADMINISTRATION MANUAL

INDIVIDUALLY ADMINISTERED MUSIC TEST #43

I. Before Starting Testing

A. INTRODUCTION

This manual describes the preparations to be made prior to testing and procedures for administering the educational assessment instruments. It is essential that you familiarize yourself with both the test and the directions prior to testing.

B. MATERIALS NEEDED FOR TEST ADMINISTRATION

The following materials should be assembled prior to the test administration:

Assessment Administration Manual
Two cassette tape recorders
One pre-recorded cassette tape labeled 43
One blank student response tape for each student to be tested
A xylophone
2 cards (enclosed) with musical notation and song lyrics
A Test Exception Report Form

Play each pre-recorded cassette tape to make sure the recorded material is complete. This can be checked with the script found under II, Directions for Test Administration. Check that the two tape recorders are working.

It will be necessary to identify each student with a unique number. The first digit will be the grade level (7 for Grade 7); the next 4 digits will be the state school number, as indicated on the list of schools provided to you prior to testing, and the last two digits will be the number for each student in order of testing.

Example: 7-3285-01. This numeral indicates the grade level (7), the school number (3285), and the student number (01). For each school and grade level you will begin renumbering students.

This number should be written on the response tape before the test administration. Use only one response tape for each student. It might be necessary to use both sides of the tape.

Before starting a test administration, record on the response tape, "This is student number ____" which will be the same number written on the blank response tape.

The Test Exception Report Form, one for each tested student, has been prepared to help you communicate pertinent information about the test. Please describe student responses to the testing method (reactions to the cassette materials, willingness to participate in the test situation, comprehension of the recorded material) and your perceptions of the test (mechanical difficulties, problems with materials, handouts and specific test items). This information is important for interpreting the recorded student responses. Therefore you must correctly identify each student on the Test Exception Report Form using the same student number given on the tape. Complete the form after each student has been tested.

II. Directions for Test Administration

You should allow about 30 minutes to test each student. This individually-administered test is to be administered to one student at a time. Testing should take place in a quiet room free from interruptions and noise. Arrange your materials for testing, preferably at a small table so student and examiner may sit opposite each other.

When you and the selected student are comfortably seated at a testing table, and the blank response tape properly labeled with the unique student number and this number recorded on the tape, proceed. If it is necessary to use both sides of the student response tape, label the end of the tape "Continued on Side 2" and the second side, "Side 2." Directions for the student are in quotations. Directions for the test administrator are in parentheses.

Directions to the Student

It is very important the the student feel comfortable with the tape recorder. It may be necessary to allow a few minutes for the student to experiment with the machines.

SAY: "I don't know if you have ever recorded anything on a cassette before, but I'd like you to record something on the cassette to hear your voice." (Allow the student to record something and play it back if he or she wishes.)

SAY: "The tape is going to ask you to participate in some musical activities. I will tape your answers on this tape. Be sure to listen carefully. Are you ready?" (When student indicates he or she is ready, turn on the student response tape and leave it on for the entire test.)

NOTE: From this point, the test items and directions are given on the pre-recorded tape. At the BEEP, the test administrator is asked to stop the pre-recorded tape. The tape script appears in boxes below.

(Turn on the pre-recorded cassette and hand the student the words to This Old Man.)

ITEM 1
Look at the words of the song This Old Man. Listen to the song. (Pause.) You sing the words to This Old Man while the voice on the tape sings Skip to My Lou. The tape will demonstrate how the two songs sound together. Listen carefully.

Now you sing This Old Man while the voice sings Skip to My Lou. Hum your starting pitch from the piano note you hear on the tape before you start. Start singing when the voice on the tape says "ready - sing" and keep singing until the song is finished. One two ready - sing.

ITEM 2
Listen to the song, Yellow Bird. Now listen to a harmony part to Yellow Bird. Listen carefully because you will be asked to sing this harmony part later. Sing the harmony part with the tape this time. Here is your starting pitch. LOO One - two - ready - sing. Now listen to the song and the harmony part together.

You sing the harmony part while the tape sings the song. Here is your starting pitch. LOO One - two - ready - sing.

BEEP (Turn off the pre-recorded cassette. Hand the student the card with the musical notation on it and the xylophone. Turn on pre-recorded tape.)

ITEM 3
Look at the notation for Go Tell Aunt Rhody. See if you can play the tune. You may practice. Tell the test examiner when you are ready to play the tune.

BEEP (Shut off the pre-recorded cassette. When the student has responded turn off the student response tape and collect the cards.)

SAY: "The test is over. Thank you for participating."

(Turn off both tapes. Rewind both the pre-recorded cassette tape and the student response tape. Make sure the student response tape is labeled correctly.

Before administering the test to the next student, select a blank student response tape, label it; and record ... "This is Student # ___" on the student response tape.)

III. Directions for Returning Test Materials

When you have completed all test administrations at a selected school place the labeled student response tapes and the completed Test Exception Report Forms in the provided envelope and mail to the address indicated on the envelope.

APPENDIX C

INDIVIDUAL TEST ADMINISTRATION MANUAL

FOR

METRIC MEASUREMENT AND MUSIC

MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

1976 – 77
YEAR 8

Michigan Department of Education

DEPARTMENT OF EDUCATION

Lansing, Michigan 48902

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Ex-Officio

Dear Test Administrator:

I am pleased that you volunteered to assist the Michigan Department of Education in collecting important information concerning the knowledge and skills of a sample of Michigan's fourth and seventh grade students. This pioneering effort, the first at the state level in the nation, is necessary to gather data on objectives that cannot be tested with group-administered items. This project is being carried out in conjunction with the Michigan Council of Teachers of Mathematics in the area of metric measurement and the Michigan Music Educators Association in the area of music. Both organizations will not only assist in collecting the data but also in interpreting the results later this year.

The data from this program will be used by educators and other citizens at the state level to examine educational programs in each of these areas. Reports of results will be given to interested persons in local districts. Hopefully, similar projects can be undertaken in other subjects in future years. Therefore, my staff and I welcome your comments concerning your experience with the project. I hope that the directions are adequate and this experience is interesting and rewarding for you. Again, thank you for assisting us.

Sincerely,

Ed Roeber

Edward D. Roeber, Ph.D.
Supervisor
Michigan Educational
Assessment Program

EDR/del

MICHIGAN
THE GREAT LAKE STATE

Individual Test Administration Manual

I. Introduction

The purpose of this manual is to clarify test administration procedures for the individual testing component of the 1976-77 Michigan Educational Assessment Program. Individually-administered tests sometimes present problems and questions for test administrators. Hopefully, this manual will address those questions and problems and assure a successful test administration. Should any problems arise that have not been covered in this manual, please telephone Jill Rodenbaugh at (517) 373-8393.

II. Assessment Materials

The music and metric measurement tests were developed with the assistance of teachers and curriculum specialists for the respective areas. Metric items were written by Wayne-Westland staff and teachers with assistance from other specialists. Test items were tried out in 1975-76, reviewed and revised by mathematics and music educators and compiled into these tests. The Department contracted with American Institutes for Research, Palo Alto, California, to package the final metric tests. Music teachers from the Detroit Public Schools and members of the Michigan Music Educators Association developed and reviewed items for the music tests.

It is important for program planning and curriculum development to gather data on the Minimal Performance Objectives for Michigan in metric and music education. Many of those objectives are not amenable to group paper-pencil testing. Therefore, in order to get valuable data concerning most of the curriculum objectives, it is necessary to administer individual tests.

The data from these tests will be reviewed by curriculum specialists in mathematics and music education and recommendations will be made by those groups for program planning and objective revisions. Reports of results will be provided to persons interested in them.

III. Sample Selection

All schools in the state were categorized by geographical area and community type. This resulted in twelve strata. The geographical areas were: 1) the tri-county Detroit area, 2) the southern half of the Lower Peninsula, 3) the remainder of the state. The community types were taken from the old community type categories used several years ago in the Assessment Program. Four schools were selected randomly from each of the stratum. Each test will be administered to approximately ten students from each selected school. Instructions for drawing the sample within each school are contained in Appendix A, "Drawing the Sample."

IV. Becoming Familiar with the Assessment Materials

Read the Assessment Administration Manual carefully and become familiar with the test and equipment. Practice by administering the test to someone.

Music test administrators will have to assemble some extra equipment:

Music - 2 cassette tape recorders
Music - Grade 4 - woodblock, autoharp
Music - Grade 7 - xylophone

Music test administrators should practice using both tape recorders in order to determine the optimal arrangement of the two tape recorders and the best volume level setting for the recorder used for taping student responses.

V. Contacting the District Coordinator

Before testing you will need a list of those eligible students in the selected grade(s) and room facilities for testing. To make these arrangements with the schools involved contact the appropriate District Coordinator immediately upon receiving your materials. The District Coordinators have already received letters concerning what they may expect (see copies in Appendix B). The District Coordinator will then ask the School Coordinator to compile the needed list and also inform her or him that a test administrator will be calling.

Points to stress:

- You, the test administrator, are representing the Michigan Educational Assessment Program

- The grade and subject area you will be testing

- The school(s) in the district in which you will be testing

- Tests are individually-administered by you, the test administrator

- If he or she does not seem to know what you are talking about, refer her or him to the letters sent by the Michigan Educational Assessment Program dated May 26, 1976, and August 11, 1976, concerning the experimantal individually-administered tests (see copies in Appendix B).

  If there are still problems call Jill Rodenbaugh, Paula Brictson, or June Olsen at (517) 373-8393. An Assessment staff member will then contact the District Coordinator.

- Ask her or him if he or she has contacted the School Coordinator about the grade list. If no, ask her or him if he or she will contact the School Coordinator about the list or would rather you did it.

In either case, ask the District Coordinator if he or she would prefer that you contact the School Coordinator about making test arrangements.

If so, obtain the name and phone number of the School Coordinator. If not, remind the District Coordinator of the points to be stressed in Section VI, "Contacting the School Coordinator."

- If the District Coordinator is concerned that there is not a completed grade list yet, inform her or him that the current available list will be sufficient (e.g., teachers' rosters for September would suffice).

- The compiled list of students should include those students who are eligible for testing using the criteria set forth in the School Coordinator's Manual.

- The list may be in any form convenient to the school (e.g., alphabetical by school or classroom, student number, etc.).

- You, the test administrator, will carry out the sampling procedure.

VI. Contacting the School Coordinator

The School Coordinator's name and phone number can be obtained from the District Coordinator, and the necessary testing arrangements can be made with the School Coordinator. Contact should be made with the School Coordinator at least one week in advance of the time you plan on testing in that school.

Points to stress:

- You, the test administrator, are representing the Michigan Educational Assessment Program.

- The grade and subject area you will be testing.

- Tests are individually-administered by you, the test administrator.

- The assessment period lasts from September 13 to October 8.

- The specific days you plan to be in the school. If your planned testing time interferes with the school's schedule of the regular Assessment testing program, you, the test administrator, will have to alter your schedule.

- A compiled list of students at the appropriate grade is needed and should include those students who are eligible for testing using the criteria set forth in the School Coordinator's Manual.

- If the School Coordinator is concerned that there is not a completed grade list yet, inform her or him that the current available list will be sufficient (e.g., teachers' rosters for September would suffice).

- The list may be in any form convenient to the school (e.g., alphabetical by school or classroom, student number, etc.)

- The list should be ready when you, the test administrator, arrive for testing.

- You, the test administrator, will carry out the sampling procedure.

- Approximate number of students in the school to be tested . . .

  Metric - grade 4: No more than 29 students per school
  Metric - grade 7 and Music - grades 4 and 7: No more than 14 students per school

- Approximate testing time per student is 1/2 hour

- A quiet room outside of the regular classroom is needed

- Necessary announcements to students, parents, and teachers should or can be made (if desired) by the School Coordinator.

Below is a brief summary of the responsibilities of the District Coordinator, School Coordinator, and test administrator:

District Coordinator:

1. Contact School Coordinator about list and inform her or him that a test administrator will be calling.

2. Give the test administrator the School Coordinator's name and number.

School Coordinator:

1. Compile list

2. Arrange for room facilities

3. Make appropriate announcements to students, parents and teachers (if desired).

Test Administrator:

1. Make initial contact with District Coordinator.

2. Obtain the School Coordinator's name and number from the District Coordinator. Ask the School Coordinator to compile the appropriate grade list.

3. Make testing arrangements with the school.

4. Assemble necessary equipment -

   Music - 2 cassette tape recorders
   Music - Grade 4 - wood block, autoharp
   Music - Grade 7 - xylophone

5. Become familiar with the test and equipment.

6. Carry out sampling procedure on obtained list.

7. Test selected students

8. Convey to the Principal/School Coordinator your appreciation on behalf of the Michigan Educational Assessment Program and ask her or him to complete the Principal/School Coordinator Reaction Form.

VII. Sampling

When you arrive at the school for testing, obtain the school's list of students for the grade(s) being tested. To determine which students will be included in the test sample for a grade, follow the procedures outlined in Appendix A, "Drawing the Sample".

NOTE: Grade 4 - Metric test administrators should refer to the special section "Drawing the Sample for Grade 4 - Metric" which follows the Grade 4 and 7 - Music and Grade 7 - Metric instructions in Appendix A.

VIII. Administering the Tests

Specific test instructions are contained in the administration manuals. Please read those manuals carefully and practice administering the tests before your first test session. Be sure that you have a quiet room free from noise and interruptions. If necessary, place a sign on the outside of the door indicating, "Testing in Session".

The following guidelines deal with students' questions and reluctance to participate during the test administration session:

Metric

As mentioned in the Assessment Administration Manual, you may answer procedural questions only. If necessary, you may repeat directions exactly if the student did not understand the first time.

If a student refuses to respond, encourage her or him. If he or she still refuses, do not select a substitute for the sample but note this on the Test Exception Form and complete the Student Answer Sheet accordingly (e.g., fill in the oval corresponding to "any other response").

Music

Students may be shy about working with the tape recorder. Therefore, allow the student time to experiment with the machines in order to become more comfortable with the tape recorders. This would be a good time for you to check on the volume level of the recorders and to make necessary adjustments before the test begins.

To relieve anxiety you should then tell the student that they will be asked to do a little singing into the recorder, they should do the best they can, and no one will know that it is her or his voice on the tape because no names are taken.

If the student refuses to respond, encourage her or him. If he or she still refuses, do not select a substitute for the sample but note this on the Test Exception Form, record "student refused to be tested" on the student response tape, and send the tape with the others.

Test administrator's instructions to students can be repeated once if necessary. Instructions on the cassette tape should not be replayed or expanded upon, but problems in these areas can be noted on the Test Exception Form..

If the student wants to hear what he or she has done on the tape, it is all right to replay it for her or him, but only after the entire test has been given. Needless to say, no changes should be made.

IX. Completing Answer Sheets, Test Exception Froms, and School and Grade Identification Sheets

Only the metric tests have answer sheets to be completed. Instructions are found on the last page of the metric Assessment Administration Manuals. The Test Exception Report Forms should be prepared for each student tested. Directions for filling out that form are found at the beginning of the Assessment Administration Manual.

The School and Grade Identification Sheet are used for both music and metric tests. They are to be completed for each school and each grade tested and included in the envelopes containing completed student response tapes (music) or answer sheets (metric) and Test Exception Forms. The school name and 4-digit number and the district name and 5-digit number can be found on the list of selected schools you have received. For music, the number of answer sheets should be replaced by the number of student response cassettes included from that school.

X. Returning Test Materials

Metric

1. For each school and each grade tested, record student's responses on answer sheets and check and return the used answer sheets, test booklets, and Test Exception Forms as directed in the Assessment Administration Manual, including a "School and Grade Identification Sheet" on top of the used answer sheets stack.

2. When testing is completed -

   A) Box the test equipment and retain it until you are notified further.

   B) Any unused paper materials (e.g., answer sheets, test booklets, Test Exception Forms) may be disposed of as you see fit.

Music

1. For each school and each grade tested, return completed student response tapes and completed Test Exception Report Forms as directed in the Assessment Administration Manual, including a completed "School and Grade Identification Sheet" on top of the Test Exception Report Form stack.

2. When testing is completed -

   A) Return the pre-recorded cassette tape and any blank student response tapes with the last set of completed student response tapes. If there is not room in the envelope, send the pre-recorded tape and any blank tapes in a separate envelope.

   B) Any unused paper materials (e.g., manuals, Test Exception Report Forms) may be disposed of as you see fit.

XI. End of Testing in Building

When you have completed testing in the building please ask the principal or School Coordinator to fill out the Principal/School Coordinator Reaction Form and mail it to Jill Rodenbaugh, Michigan Department of Education, P.O. Box 30008, Lansing, 48909 within the week.

Please convey to the principal/School Coordinator your appreciation on behalf of the Michigan Educational Assessment Program and the Michigan Department of Education for their cooperation and assistance in this effort.

APPENDIX A

Drawing the Sample for Grades 4 and 7 - Music and Grade 7 - Metric

The individual test packages in Music - Grades 4 and 7 and Metric - Grade 7 will be administered to approximately 10 students per school. It is necessary to be very careful in selecting these students in order to make sure they validly represent a cross-section of talent and ability among Michigan students. Please follow the instructions below.

1. If the total school enrollment in this grade (4 or 7, depending on on the test being administered) is 14 or less, then administer the test to every student.

2. If there are 15 or more students in this grade (4 or 7, depending on the test being administered) it will be necessary to pick a sample of them. Please follow the steps given below exactly in choosing this sample. Otherwise, it could be invalid.

   A. Obtain from the school a list of all the students in this grade. The list can be organized in any way convenient to the school, but it should include only those students in either Grade 4 or 7, depending on the test being administered.

   B. Determine the total enrollment of the appropriate grade (4 or 7, depending on the test being administered) from the list.

   C. Divide the total enrollment by 10 and round the result to the nearest whole number. (1/2 is rounded up.) Call the result "N."

   D. Place an "X" by the name of the first student on the list.

   E. Count down N names and place an "X" by the name of the last (N-th) student.

   F. Repeat Step E until you have run out of names.

   G. There should be approximately 10 students with an "X" by their name. The actual number may vary from 8 to 12. If there are fewer than 8 or more than 12 students with an "X" by their name you have made an error; repeat the procedure.

   H. Administer the test to those students with an "X" by their name.

3. If a student included in the test sample is absent on the day of testing -

   A. Go back to the list of students in the grade.

   B. Select the name on the list which follows the absent student's and which is not already included in the test sample.

C. If that student is absent select the next student not already included in the test sample.

D. If there are no students on the list who are not already included in the sample, omit the absent student from the sample, and the sample size will be smaller.

E. If the last student on the list is in the sample and absent, follow the above procedure starting with the beginning of the list until a student not already in the sample is found.

DO NOT

- Use any students except those in either Grade 4 or 7, depending on the test being administered.
- Select only the first 10 students on the list.
- Select students any other way than indicated on Page A-1.
- Use substitutes for chosen students unless a chosen student is absent. In that case follow the previously outlined procedures for absent students.

If you have any problems in choosing this sample, please call collect - Jill Rodenbaugh at (517) 373-8393.

EXAMPLE #1

Following is the roster for George Washington School.

Abbot, Susan J.
Appleby, Ralph J.
Bell, Mark A.
Clifford, Margaret
Foley, Walter J.
Hill, John D.
Stone, Mary
White, Nancy R.
Wood, Richard

Since there are only nine students in this grade for this school, all of them will be tested.

If Walter J. Foley was absent on the day of testing, no substitution would occur, and the number of students tested would be eight.

EXAMPLE #2

Following is the roster for Abraham Lincoln School:

	Mrs. Jones' Class		Mrs. Smith's Class
X	Albin, Norman T.		Allen, Dorothy
	Anders, John		Atkins, Steve
	Bell, Melvin		Benton, Susie
	Campbell, Gerald	X	Blake, Don
	Cook, Sherry		Boyd, Mark
	Cronkite, Walter		Carlson, Lea Ann
X	Davis, Tom		Clark, Jim
	Edward, Cindy		Dorsey, Donald
	Foley, Dennis		Gable, Danny
	Gartland, Phyllis	X	Hartman, Mary
	Hunt, Robert		Howard, Tom
	Irwin, Phyllis		Humphrey, Bob
X	Kline, Louise		Jackson, Mary
	Larew, Gary		Kirk, Bill
	MacDonald, Pamela		Lang, Rosemary
	Moore, Mary T.	X	MacArthur, John
	Murray, James		New, Mike
	Myers, Janet		Olsen, Svetlana
X	Oakes, Dean		Packard, Christee
	Pepper, Robert		Randalls, Ron
	Randall, Carol		Reed, Patricia
	Ring, Delores	X	Riley, Chester A.
	Robert, Tim		Robert, Edward
	Smith, Carl		Sampson, Cindy
X	Stokes, Tamara		Snyder, Martha
	Stone, Betty		Storm, Betty
	Weber, James		Vernon, Alma
		X	Wright, Pauline

a. There are 27 + 28 = 55 students in this grade for this school.

b. $55 \div 10 = 5\ 1/2$

c. Rounding to the nearest whole number, we get 6.

d. The students are marked off by "X's" on the list. A total of 10 students are selected. In other situations, the number of students selected may vary from 8 to 12.

e. If Dean Oakes was absent on the day of testing, Robert Pepper would replace him in the test sample. If Pauline Wright was absent, John Anders would replace her.

Drawing the Sample for

Grade 4 - Metric

The individual test packages in Grade 4 will be administered to approximately 20 students per school. It is necessary to be very careful in selecting these students in order to make sure they validly represent a cross-section of talent and ability among Michigan students. Please follow the instructions below.

1. Obtain from the school a list of all the students in this grade. The list can be organized in any way convenient to the school, but it should include only those students in Grade 4.

2. Determine the total enrollment in Grade 4 from the list.

3. If the total school enrollment in this grade is 29 or less then every student will be administered a test. Assign Test 13 to the 1st, Test 14 to the 2nd, Test 13 to the 3rd, Test 14 to the 4th, etc.

4. If there are 30 or more students in this grade it will be necessary to pick a sample of them. Please follow the steps given below exactly in choosing this sample. Otherwise, it could be invalid.

   A. Divide the total enrollment by 20 and round the result to the nearest whole number. (1/2 is rounded up.) Call the result "N."

   B. Place an "X" by the name of the first student on the list.

   C. Count down N names and place an "X" by the name of the last (N-th) student.

   D. Repeat Step C until you have run out of names.

   E. There should be approximately 20 students with an "X" by their name. The actual number may vary from 15 to 25. If there are fewer than 15 or more than 25 students with an "X" by their name you have made an error; repeat the procedure.

   F. Administer Test 13 to the first student with an "X" by her or his name, Test 14 to the second student with an "X" by her or his name, Test 13 to the third student with an "X" by her or his name, Test 14 to the fourth student with an "X" by her or his name, etc.

5. If a student included in the test sample is absent on the day of testing -

   A. Go back to the list of students in the grade.

   B. Select the name on the list which follows the absent student's and which is not already included in the test sample.

   C. If that student is absent select the next student not already included in the test sample.

D. If there are no students on the list who are not already included in the sample, omit the absent student from the sample, and the sample size will be smaller.

E. If the last student on the list is in the sample and absent, follow the above procedure starting with the beginning of the list until a student not already in the sample is found.

DO NOT

- Use any students except those in Grade 4.
- Select only the first 20 students on the list.
- Select students any other way than indicated on Page A-5.
- Use substitutes for chosen students unless a chosen student is absent. In that case follow the previously outlined procedures for absent students.

If you have any problems in choosing this sample, please call collect Jill Rodenbaugh at (517) 373-8393.

EXAMPLE #1

Following is the roster for George Washington School.

Abbot, Susan J	Test 13
Appleby, Ralph J.	Test 14
Bell, Mark A	Test 13
Clifford, Margaret	Test 14
Foley, Walter J.	Test 13
Hill, John D.	Test 14
Stone, Mary	Test 13
White, Nancy R.	Test 14
Wood, Richard	Test 13

Since there are only 9 students in this grade for this school, all of them will be tested.

Test 13 will be administered to the 1st student, Test 14 to the 2nd, Test 13 to the 3rd, Test 14 to the 4th, etc. Therefore, the students in this school will be assigned in the following manner:

Test 13	Test 14
Abbot, Susan J	Appleby, Ralph J.
Bell, Mark A.	Clifford, Margaret
Foley, Walter J.	Hill, John D.
Stone, Mary	White, Nancy
Wood, Richard	

If Mark A. Bell was absent on the day of testing, no substitution would occur, and the number of students tested with Test 13 would be 4.

EXAMPLE #2

Following is the roster for Abraham Lincoln School:

	Mrs. Jones' Class		Mrs. Smith's Class	
X	Albin, Norman T	Test 13	X Allen, Dorothy	Test 14
	Anders, John		Atkins, Steve	
	Bell, Melvin		Benton, Susie	
X	Campbell, Gerald	Test 14	X Blake, Don	Test 13
	Comaneci, Nadia		Boyd, Mark	
	Cronkite, Walter		Carlson, Lea Ann	
X	Davis, Tom	Test 13	X Clark, Jim	Test 14
	Edwards, Cindy		Corsey, Donald	
	Foley, Dennis		Gable, Danny	
X	Gartland, Phyllis	Test 14	X Hartman, Mary	Test 13
	Hunt, Robert		Howard, Tom	
	Irwin, Phyllis		Humphrey, Bob	
X	Kline, Louise	Test 13	X Jackson, Mary	Test 14
	Larew, Gary		Kirk, Bill	
	MacDonald, Pamela		Lang, Rosemary	
X	Moore, Mary T.	Test 14	X MacArthur, John	Test 13
	Murray, James		New, Mike	
	Myers, Janet		Olsen, Lana	
X	Oakes, Dean	Test 13	X Packard, Christee	Test 14
	Pepper, Robert		Randalls, Ron	
	Randall, Carol		Reed, Patricia	
X	Ring, Delores	Test 14	X Riley, Chester A	Test 13
	Roberts, Tim		Rogers, Edward	
	Smith, Carl		Sampson, Cindy	
X	Stokes, Tamara	Test 13	X Snyder, Martha	Test 14
	Stone, Betty		Storm, Betty	
	Weber, James		Vernon, Alma	
			X Wright, Pauline	

a. There are 27 + 28 = 55 students in this grade for this school.

b. $55 \div 20 = 2\ 3/4$

c. Rounding to the nearest whole number, we get 3.

d. The students are marked off by "X's" on the list. A total of 19 students are selected. In other situations, the number of students selected may vary from 15 to 25.

e. If Mary Jackson was absent on the day of testing, Bill Kirk would replace her in the test sample for Test 14. If Pauline Wright was absent, John Anders would replace her in the sample for Test 13.

STATE OF MICHIGAN

DEPARTMENT OF EDUCATION

Lansing, Michigan 48902

JOHN W. PORTER
Superintendent of
Public Instruction

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GOV. WILLIAM G. MILLIKEN
Ex-Officio

May 26, 1976

Dear Superintendent:

The 1976-77 Michigan Educational Assessment Program (MEAP) will include experimental testing at grades 4 and 7 in addition to the regular MEAP testing at these grades. The experimental tests are of three types:

1) Group administered tests in mathematics, metric measurement and reading;
2) Group administered tests in music; and
3) Individually administered tests in metric measurement or music.

If the school(s) in your district were selected for type 1 or type 2, the necessary materials and instructions will be sent to you by Westinghouse Learning Corporation in August. If any school(s) were selected for the type 3 (individually administered) tests, your district's Assessment Coordinator will be contacted by a specially-trained test administrator, who will draw a random sample of students from the selected school(s) and give the test to those students. This test administrator will be a person outside your school district, so that this testing will not disrupt normal teaching assignments.

The attached sheet shows which of your schools will participate in which type of test. Please call an assessment staff member at (517) 373-8393 if you have any questions.

Sincerely,

David J. Donovan
Director
Research, Evaluation
and Assessment Services

DLD:jcc
attachment

cc: Assessment Coordinator
Principal of Selected School(s)

MICHIGAN
THE GREAT LAKE STATE

DEPARTMENT OF EDUCATION

Lansing, Michigan 48902

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BARBARA J. ROBERTS
NORMAN OTTO STOCKMEYER, SR.
GOV. WILLIAM G. MILLIKEN
Ex-Officio

August 11, 1976

Dear Assessment Coordinator:

In a letter dated May 26, 1976, you were informed of the school(s) in your district that would be involved with the Michigan Educational Assessment Program's individually-administered experimental tests at fourth or seventh grade in metric measurement or music in the fall of 1976. Sometime after September 7th, a specially-trained Test Administrator will contact you to make the necessary arrangements for the testing. You will be asked to contact the school coordinator(s) in the selected schools to tell them who will administer the tests and arrangements that need to be made.

A random sample of students will be tested in the appropriate grade(s) of the selected school(s). In order to draw these samples, the Test Administrator will need a list from the school coordinator of all those students in the selected grade(s) who are eligible to be tested using the criteria set forth in the School Coordinator's Manual. The Test Administrator will then use sampling procedures to determine those students to be tested. This list may be set up in any order that is convenient for the school as long as it is complete (e.g., alphabetically by school or classroom, or by student number, and so forth). Each sample will include no more than 14 students per selected school with the exception of the Grade 4 Metric Measurement test, where no more than 29 students per selected school will be tested. Testing time will be approximately 1/2 hour per student. All testing will take place during the regular assessment period between September 13 and October 8 and will be carried out by the specially-trained Test Administrator.

The school coordinator should arrange for a quiet room outside of the regular classroom for test administration. It is also asked that the school coordinator make any necessary announcements to students, parents, and classroom teachers.

If you have any questions concerning the arrangements to be made prior to or during testing, please contact an assessment staff member at (517) 373-8393.

Sincerely,

Edward D. Roeber, Ph.D.
Supervisor, Michigan Educational
Assessment Program

cc: Superintendent
Principal of Selected School(s)

MICHIGAN
THE GREAT LAKE STATE

MEAP 76-77 ITEM ANALYSIS GRADE 4 EXPERIMENTAL
EXPERIMENTAL BOOK 14
METRIC OBJ 01 CODE-01-01-004 NCNT= 462 WEIGHTED NCNT= 124186 ATTAINMENT RATE=

ITEM 1			1	*2	3	4	5
P-VALUE WEIGHTED	+0.83	ATTAINERS OF OBJ	0.4	82.9	0.2	1.3	/
PT BISERIAL	+0.66	NON-ATTAINERS OF OBJ	0.9	3.9	3.9	6.5	/
CORR PT BISERIAL	+0.38						
BRENNAN INDEX	+0.72	TOTAL TAKING OBJ.	1.3	86.8	4.1	7.8	/
ITEM 2			1	*2	3	4	5
P-VALUE WEIGHTED	+0.88	ATTAINERS OF OBJ	0.2	84.2	0.2	0.2	/
PT BISERIAL	+0.68	NON-ATTAINERS OF OBJ	0.6	6.1	3.2	5.2	/
CORR PT BISERIAL	+0.47						
BRENNAN INDEX	+0.59	TOTAL TAKING OBJ.	0.9	90.3	3.5	5.4	/
ITEM 3			1	*2	3	4	5
P-VALUE WEIGHTED	+0.93	ATTAINERS OF OBJ	0.0	84.2	0.0	0.6	/
PT BISERIAL	+0.57	NON-ATTAINERS OF OBJ	0.2	10.4	1.3	3.2	/
CORR PT BISERIAL	+0.38						
BRENNAN INDEX	+0.31	TOTAL TAKING OBJ.	0.2	94.6	1.3	3.9	/
ITEM 4			1	*2	3	4	5
P-VALUE WEIGHTED	+0.79	ATTAINERS OF OBJ	0.2	79.0	3.7	1.9	/
PT BISERIAL	+0.72	NON-ATTAINERS OF OBJ	1.3	2.4	3.9	7.6	/
CORR PT BISERIAL	+0.45						
BRENNAN INDEX	+0.77	TOTAL TAKING OBJ.	1.5	81.4	7.6	9.5	/
ITEM 5			1	2	3	*4	5
P-VALUE WEIGHTED	+0.96	ATTAINERS OF OBJ	0.0	1.1	0.0	83.8	/
PT BISERIAL	+0.38	NON-ATTAINERS OF OBJ	0.0	1.5	1.3	12.3	/
CORR PT BISERIAL	+0.20						

AP 76-77 ITEM ANALYSIS GRADE 4 EXPERIMENTAL
PERIMENTAL BOOK 14
TRIC OBJ 01 CODE-01-01-004 NCNT= 462 WEIGHTED NCNT= 124186 ATTAINMENT RATE= 85

ITEM 6			1	2	*3	4	5
P-VALUE WEIGHTED	+0.39	ATTAINERS OF OBJ	5.2	0.9	78.4	0.4	/
PT BISERIAL	+0.22	NON-ATTAINERS OF OBJ	1.9	0.2	12.6	0.4	/
CORR PT BISERIAL	-0.07						
BRENNAN INDEX	+0.10	TOTAL TAKING OBJ.	7.1	1.1	90.9	0.9	/

MEAP 76-77 ITEM ANALYSIS GRADE 4 EXPERIMENTAL
EXPERIMENTAL BOOK 14
METRIC OBJ 02 CODE-01-03-004 NCNT= 462 WEIGHTED NCNT= 124186 ATTAINMENT RATE=

ITEM 7

			1	*2	3	4	5
P-VALUE WEIGHTED	+0.50	ATTAINERS OF OBJ					
PT BISERIAL	+0.86	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.43						
BRENNAN INDEX	+0.67	TOTAL TAKING OBJ.	15.2	47.4	8.2	28.1	/

ITEM 8

			1	*2	3	4	5
P-VALUE WEIGHTED	+0.58	ATTAINERS OF OBJ					
PT BISERIAL	+0.76	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.26						
BRENNAN INDEX	+0.34	TOTAL TAKING OBJ.	12.6	59.3	10.0	17.7	/

AP 76-77 ITEM ANALYSIS GRADE 4 EXPERIMENTAL
PERIMENTAL SOUK 14
TRIC OBJ 03 CODE-01-03-006 NCNT= 462 WEIGHTED NCNT= 124186 ATTAINMENT RATE=***

ITEM 9			*1	2	3	4	5
P-VALUE WEIGHTED	+0.68	ATTAINERS OF OBJ					
PT BISERIAL	+0.92	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	-0.28						
BRENNAN INDEX	+1.00	TOTAL TAKING OBJ.	71.9	27.9	/	/	/

AP 76-77 ITEM ANALYSIS GRADE 4 EXPERIMENTAL
PERIMENTAL BOOK 14
TRIC OBJ 04 CODE-02-04-004 NCNT= 462 WEIGHTED NCNT= 124186 ATTAINMENT RATE=***

			1	*2	3	4	5	C
ITEM 10								
P-VALUE WEIGHTED	+0.60	ATTAINERS OF OBJ						
PT BISERIAL	+0.91	NON-ATTAINERS OF OBJ						
CORR PT BISERIAL	+0.27							
BRENNAN INDEX	+0.62	TOTAL TAKING OBJ.	3.0	58.0	36.8	2.2	/	

			1	*2	3	4	5	C
ITEM 11								
P-VALUE WEIGHTED	+0.94	ATTAINERS OF OBJ						
PT BISERIAL	+0.79	NON-ATTAINERS OF OBJ						
CORR PT BISERIAL	+0.55							
BRENNAN INDEX	+0.97	TOTAL TAKING OBJ.	1.3	90.3	4.8	3.7	/	

MEAP 76-77 ITEM ANALYSIS GRADE 4 EXPERIMENTAL
EXPERIMENTAL BOOK 14
METRIC OBJ 05 CODE-02-04-002 NCNT= 462 WEIGHTED NCNT= 124186 ATTAINMENT RATE=*

ITEM 12			1	*2	3	4	5
P-VALUE WEIGHTED	+0.87	ATTAINERS OF OBJ					
PT BISERIAL	+0.88	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.49						
BRENNAN INDEX	-0.86	TOTAL TAKING OBJ.	0.4	86.4	3.9	7.6	/

ITEM 13			1	*2	3	4	5
P-VALUE WEIGHTED	+0.90	ATTAINERS OF OBJ					
PT BISERIAL	+0.89	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.61						
BRENNAN INDEX	-0.89	TOTAL TAKING OBJ.	3.0	88.5	5.0	2.4	/

MEAP 76-77 ITEM ANALYSIS GRADE 4 EXPERIMENTAL
EXPERIMENTAL BOOK 13
METRIC OBJ 01 CODE-01-01-005 NCNT= 470 WEIGHTED NCNT= 124186 ATTAINMENT R

ITEM 1			1	*2	3	4
P-VALUE WEIGHTED	+0.76	ATTAINERS OF OBJ				
PT BISERIAL	+0.65	NON-ATTAINERS OF OBJ				
CORR PT BISERIAL	+0.33					
BRENNAN INDEX	+0.98	TOTAL TAKING OBJ.	1.5	82.4	1.0	14.9
ITEM 2			1	*2	3	4
P-VALUE WEIGHTED	+0.59	ATTAINERS OF OBJ				
PT BISERIAL	+0.73	NON-ATTAINERS OF OBJ				
CORR PT BISERIAL	+0.39					
BRENNAN INDEX	+0.79	TOTAL TAKING OBJ.	10.7	66.1	3.3	19.7
ITEM 3			1	*2	3	4
P-VALUE WEIGHTED	+0.52	ATTAINERS OF OBJ				
PT BISERIAL	+0.73	NON-ATTAINERS OF OBJ				
CORR PT BISERIAL	+0.39					
BRENNAN INDEX	+0.70	TOTAL TAKING OBJ.	12.8	58.8	5.9	22.4

.P 76-77 ITEM ANALYSIS GRADE 4 EXPERIMENTAL
'ERIMENTAL BOOK 13
RIC OBJ 02 CODE-01-01-006 NCNT= 478 WEIGHTED NCNT= 124186 ATTAINMENT RATE=***

ITEM 4			1	*2	3	4	5 C
P-VALUE WEIGHTED	+0.41	ATTAINERS OF OBJ					
PT BISERIAL	+1.00	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+1.00						
BRENNAN INDEX	+0.94	TOTAL TAKING OBJ.	7.3	38.5	1.0	52.9	/
ITEM 5			1	*2	3	4	5 C
P-VALUE WEIGHTED	+0.34	ATTAINERS OF OBJ					
PT BISERIAL	+0.94	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.87						
BRENNAN INDEX	+0.80	TOTAL TAKING OBJ.	2.7	35.1	0.6	61.3	/
ITEM 6			1	*2	3	4	5 C
P-VALUE WEIGHTED	+0.36	ATTAINERS OF OBJ					
PT BISERIAL	+0.96	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.91						
BRENNAN INDEX	+0.89	TOTAL TAKING OBJ.	0.8	36.4	1.9	60.5	/

AP 76-77 ITEM ANALYSIS GRADE 4 EXPERIMENTAL
PERIMENTAL BOOK 13
TRIC OBJ 03 CODE-01-01-007 NCNT= 478 WEIGHTED NCNT= 124186 ATTAINMENT RATE=***

ITEM 7			1	*2	3	4	5
P-VALUE WEIGHTED	+0.73	ATTAINERS OF OBJ					
PT BISERIAL	+0.87	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.69						
BRENNAN INDEX	+0.88	TOTAL TAKING OBJ.	5.0	73.6	6.7	14.4	/
ITEM 8			1	*2	3	4	5
P-VALUE WEIGHTED	+0.75	ATTAINERS OF OBJ					
PT BISERIAL	+0.84	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.65						
BRENNAN INDEX	+0.92	TOTAL TAKING OBJ.	5.0	77.2	6.3	11.3	/
ITEM 9			1	*2	3	4	5
P-VALUE WEIGHTED	+0.72	ATTAINERS OF OBJ					
PT BISERIAL	+0.82	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.60						
BRENNAN INDEX	+0.91	TOTAL TAKING OBJ.	4.8	75.9	5.4	13.6	/

			1	*2	3	4	5	O
ITEM 10								
P-VALUE WEIGHTED	+0.95	ATTAINERS OF OBJ						
PT BISERIAL	+0.75	NON-ATTAINERS OF OBJ						
CORR PT BISERIAL	+0.30							
BRENNAN INDEX	+0.97	TOTAL TAKING OBJ.	2.1	95.2	1.5	1.0	/	

			1	*2	3	4	5	O
ITEM 11								
P-VALUE WEIGHTED	+0.91	ATTAINERS OF OBJ						
PT BISERIAL	+0.83	NON-ATTAINERS OF OBJ						
CORR PT BISERIAL	+0.22							
BRENNAN INDEX	+0.94	TOTAL TAKING OBJ.	3.8	91.3	3.3	0.8	/	

MEAP 76-77 ITEM ANALYSIS GRADE 4 EXPERIMENTAL
EXPERIMENTAL BOOK 13
METRIC OBJ 05 CODE-02-05-002 NCNT= 478 WEIGHTED NCNT= 124186 ATTAINMENT RATE=

ITEM 12			1	*2	3	4	5
P-VALUE WEIGHTED	+0.65	ATTAINERS OF OBJ					
PT BISERIAL	+0.63	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	-0.16						
BRENNAN INDEX	+0.73	TOTAL TAKING OBJ.	34.3	64.6	0.4	0.4	/
ITEM 13			1	2	*3	4	5
P-VALUE WEIGHTED	+0.54	ATTAINERS OF OBJ					
PT BISERIAL	+0.61	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	-0.23						
BRENNAN INDEX	+0.65	TOTAL TAKING OBJ.	0.8	0.4	57.9	40.6	/

(PERIMENTAL BOOK 13 ITEM ANALYSIS GRADE 4 EXPERIMENTAL
=TRIC OBJ 06 CODE-02-05-003 NCNT= 478 WEIGHTED NCNT= 124186 ATTAINMENT RAT

ITEM 14

P-VALUE WEIGHTED	+0.86	ATTAINERS OF OBJ	1	*2	3	4	5
PT BISERIAL	+1.21						
CORR PT BISERIAL	+0.57	NON-ATTAINERS OF OBJ					
BRENNAN INDEX	+1.00	TOTAL TAKING OBJ.	0.8	81.0	2.9	14.6	/

MEAP 76-77 ITEM ANALYSIS GRADE 4 EXPERIMENTAL
EXPERIMENTAL BOOK 13
METRIC OBJ 07 CODE-02-05-004 NCNT= 478 WEIGHTED NCNT= 124186 ATTAINMENT RATE=

			1	*2	3	4	5
ITEM 15							
P-VALUE WEIGHTED	+0.27	ATTAINERS OF OBJ					
PT BISERIAL	+1.03	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.06						
BRENNAN INDEX	+1.00	TOTAL TAKING OBJ.	14.6	25.9	18.8	40.0	/

ITEM 9			1	*2	3	4	5
P-VALUE WEIGHTED	+0.35	ATTAINERS OF OBJ					
PT BISERIAL	+0.74	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.24						
BRENNAN INDEX	+0.35	TOTAL TAKING OBJ.	9.2	34.9	25.9	29.6	/
ITEM 10			1	*2	3	4	5
P-VALUE WEIGHTED	+0.64	ATTAINERS OF OBJ					
PT BISERIAL	+0.76	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.27						
BRENNAN INDEX	+0.65	TOTAL TAKING OBJ.	1.5	64.2	10.9	22.9	/
ITEM 11			1	*2	3	4	5
P-VALUE WEIGHTED	+0.97	ATTAINERS OF OBJ					
PT BISERIAL	+0.26	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.07						
BRENNAN INDEX	+0.98	TOTAL TAKING OBJ.	0.4	97.4	0.6	1.1	/
ITEM 12			1	*2	3	4	5
P-VALUE WEIGHTED	+0.97	ATTAINERS OF OBJ					
PT BISERIAL	+0.37	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.19						
BRENNAN INDEX	+0.97	TOTAL TAKING OBJ.	0.0	96.8	0.2	2.6	/

MEAP 76-77 ITEM ANALYSIS GRADE 7 EXPERIMENTAL
EXPERIMENTAL BOOK 28
METRIC OBJ 03 CODE-01-01-021 NCNT= 467 WEIGHTED NCNT= 157189 ATTAINMENT RA

			1	*2	3	4	5
ITEM 7							
P-VALUE WEIGHTED	+0.81	ATTAINERS OF OBJ					
PT BISERIAL	+0.92	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.74						
BRENNAN INDEX	+1.00	TOTAL TAKING OBJ.	0.2	79.7	0.0	19.7	
ITEM 8			1	*2	3	4	5
P-VALUE WEIGHTED	+0.59	ATTAINERS OF OBJ					
PT BISERIAL	+0.90	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.54						
BRENNAN INDEX	+0.75	TOTAL TAKING OBJ.	17.1	59.7	1.5	21.2	

MEAP 76-77 ITEM ANALYSIS GRADE 7 EXPERIMENTAL
EXPERIMENTAL BOOK 28
METRIC OBJ 02 CODE-01-01-013 NCNT= 467 WEIGHTED NCNT= 157189 ATTAINMENT RAT

			1	*2	3	4	5
ITEM 5							
P-VALUE WEIGHTED	+0.89	ATTAINERS OF OBJ					
PT BISERIAL	+0.94	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.77						
BRENNAN INDEX	+0.98	TOTAL TAKING OBJ.	6.2	89.1	0.0	4.3	/
ITEM 6			1	*2	3	4	5
P-VALUE WEIGHTED	+0.88	ATTAINERS OF OBJ					
PT BISERIAL	+0.89	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.61						
BRENNAN INDEX	+0.98	TOTAL TAKING OBJ.	6.2	89.5	0.0	3.6	/

MEAP 76-77 ITEM ANALYSIS GRADE 7 EXPERIMENTAL

EXPERIMENTAL BOOK 2ø NCNT= 467 WEIGHTED NCNT= 157189 ATTAINMENT R/

METRIC OBJ 01 CODE-01-01-009

			1	*2	3	4
ITEM 1						
P-VALUE WEIGHTED	+0.57	ATTAINERS OF OBJ				
PT BISERIAL	+0.76	NON-ATTAINERS OF OBJ				
CORR PT BISERIAL	+0.51					
BRENNAN INDEX	+0.66	TOTAL TAKING OBJ.	0.4	59.5	0.0	39.6
			1	*2	3	4
ITEM 2						
P-VALUE WEIGHTED	+0.47	ATTAINERS OF OBJ				
PT BISERIAL	+0.75	NON-ATTAINERS OF OBJ				
CORR PT BISERIAL	+0.49					
BRENNAN INDEX	+0.55	TOTAL TAKING OBJ.	7.1	49.5	2.8	40.3
			1	*2	3	4
ITEM 3						
P-VALUE WEIGHTED	+0.63	ATTAINERS OF OBJ				
PT BISERIAL	+0.64	NON-ATTAINERS OF OBJ				
CORR PT BISERIAL	+0.42					
BRENNAN INDEX	+0.94	TOTAL TAKING OBJ.	0.9	84.6	2.8	11.3
			1	*2	3	4
ITEM 4						
P-VALUE WEIGHTED	+0.83	ATTAINERS OF OBJ				
PT BISERIAL	+0.64	NON-ATTAINERS OF OBJ				
CORR PT BISERIAL	+0.42					
BRENNAN INDEX	+0.93	TOTAL TAKING OBJ.	0.9	84.2	3.6	10.9

			1	*2	3	4	5
ITEM 13							
P-VALUE WEIGHTED	+0.17	ATTAINERS OF OBJ					
PT BISERIAL	+0.55	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.23						
BRENNAN INDEX	+0.21	TOTAL TAKING OBJ.	16.3	18.6	3.4	61.2	/
ITEM 14			1	*2	3	4	5
P-VALUE WEIGHTED	+0.32	ATTAINERS OF OBJ					
PT BISERIAL	+0.62	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.25						
BRENNAN INDEX	+0.35	TOTAL TAKING OBJ.	8.6	30.3	2.8	57.4	/
ITEM 15			1	*2	3	4	5
P-VALUE WEIGHTED	+0.58	ATTAINERS OF OBJ					
PT BISERIAL	+0.63	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.23						
BRENNAN INDEX	+0.70	TOTAL TAKING OBJ.	7.1	61.7	4.3	26.6	/
ITEM 16			1	*2	3	4	5
P-VALUE WEIGHTED	+0.75	ATTAINERS OF OBJ					
PT BISERIAL	+0.59	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.23						
BRENNAN INDEX	+0.69	TOTAL TAKING OBJ.	4.7	77.5	2.4	15.0	/

MEAP 76-77 ITEM ANALYSIS GRADE 7 EXPERIMENTAL
EXPERIMENTAL BOOK 28
METRIC OBJ 06 CODE-02-05-008 NCNT= 467 WEIGHTED NCNT= 157189 ATTAINMENT RAT

ITEM 17			1	*2	3	4	5
P-VALUE WEIGHTED	+0.09	ATTAINERS OF OBJ					
PT BISERIAL	+0.63	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.23						
BRENNAN INDEX	+0.33	TOTAL TAKING OBJ.	10.5	11.3	13.5	64.2	/
ITEM 18			1	*2	3	4	5
P-VALUE WEIGHTED	+0.26	ATTAINERS OF OBJ					
PT BISERIAL	+0.76	NON-ATTAINERS OF OBJ					
CORR PT BISERIAL	+0.12						
BRENNAN INDEX	+0.91	TOTAL TAKING OBJ.	24.6	31.5	5.1	38.1	/

NEAP 76-77 ITEM ANALYSIS GRADE 4 EXPERIMENTAL

EXPERIMENTAL BOOK 32

MUSIC OBJ 01 CODE-2-2 NCNT= 459 WEIGHTED NCNT= 15047 ATTAINMENT RAT

ITEM				A	B	C	D	E
	P-VALUE WEIGHTED	+0.73	ATTAINERS OF OBJ	58.[illegible]	0.0	0.0	0.0	/
	PT BISERIAL	+0.47	NON-ATTAINERS OF OBJ	0.0	30.7	0.7	0.0	/
	CORR PT BISERIAL	+0.22						
	BRENNAN INDEX	+1.00	TOTAL TAKING OBJ.	58.[illegible]	30.7	0.7	0.0	/
	I-I		COMPLETENESS OF RESPONSE	A	B	C	D	E
				9[illegible].0	9.[illegible]	[illegible].7	/	/
	I-II		DESCRIPTION OF RESPONSE	A	B	C	D	E
				57.1	17.4	11.1	3.7	/
	I-III		QUALITY OF RESPONSE	A	B	C	D	E
				43.[illegible]	35.1	15.9	/	/

YEAR 76-77 ITEM ANALYSIS GRADE 4 EXPERIMENTAL
EXPERIMENTAL BOOK 22
MUSIC OBJ 02 CODE=1-6 ACNT= 459 WEIGHTED NCNT= 150470 ATTAINMENT RATE=

				A	B	C	D	E
	P-VALUE WEIGHTED	+0.34	ATTAINERS OF OBJ	33.2	0.0	0.0	0.0	/
	ATTRISERIAL	+0.48	NON-ATTAINERS OF OBJ	0.0	65.3	1.3	0.9	/
	CORR BI RISERIAL	+0.20						
	GUTTMAN INDEX	+1.00	TOTAL TAKING OBJ.	33.2	65.3	1.3	0.9	/

			A	B	C	D	E
	2-I	COMPLETENESS OF RESPONSE	91.3	6.3	1.3	0.9	/
	2-II	CHORD SCORE	35.0	7.2	5.4	/	/
	2-III	PATTERN AND TEMPO SCORE	34.6	13.0	/	/	/

			A	B	C	D	E
P-VALUE WEIGHTED	+0.44	ATTAINERS OF OBJ	28.1	2.0	0.7	0.0	/
PT BISERIAL	+0.58	NON-ATTAINERS OF OBJ	17.1	47.3	4.8	0.0	/
CORR PT BISERIAL	+0.23						
FORMAN INDEX	+0.67	TOTAL TAKING OBJ.	45.1	49.2	5.4	0.0	/

		A	B	C	D	E
3-I	FIRST PITCH	47.1	46.5	6.3	/	/
3-II	SECOND PITCH	41.8	52.1	6.1	/	/
3-III	THIRD PITCH	39.1	52.8	8.3	/	/
3-IV	FOURTH PITCH	35.3	54.9	9.8	/	/
3-V	FIFTH PITCH	12.9	45.2	41.2	/	/
3-VI	FIRST INTERVAL	53.3	34.6	8.5	/	/
3-VII	SECOND INTERVAL	50.1	41.6	8.2	/	/
3-VIII	THIRD INTERVAL	48.4	41.8	9.8	/	/
3-IX	FOURTH INTERVAL	12.9	48.8	38.3	/	/

MEAP 76-77 ITEM ANALYSIS GRADE 4 EXPERIMENTAL

EXPERIMENTAL BOOK 32

MUSIC OBJ 03 CODE -1-2 NCNT= 459 WEIGHTED NCNT= 150470 ATTAINMENT RAT

ITEM 4

	2-VALUE WEIGHTED	+0.19	ATTAINERS OF OBJ	A 15.9	B 14.8	C 0.0	D 0.0	E /
	BI-SERIAL	+0.46	NON-ATTAINERS OF OBJ	5.2	61.2	2.8	0.0	/
	CORR BI-SERIAL	+0.24						
	DIFFICULTY INDEX	+0.44	TOTAL TAKING OBJ.	21.1	76.0	2.8	0.0	/
	4-I	FIRST PITCH		A 58.2	B 39.0	C 2.8	D /	E /
	4-II	SECOND PITCH		A 50.8	B 46.0	C 3.3	D /	E /
	4-III	THIRD PITCH		A 15.7	B 76.0	C 8.3	D /	E /
	4-IV	FOURTH PITCH		A 22.0	B 71.2	C 6.8	D /	E /
	4-V	FIFTH PITCH		A 25.3	B 52.3	C 22.4	D /	E /
	4-VI	FIRST INTERVAL		A 65.8	B 30.9	C 3.3	D /	E /
	4-VII	SECOND INTERVAL		A 16.6	B 75.6	C 7.8	D /	E /
	4-VIII	THIRD INTERVAL		A 20.3	B 70.6	C 9.2	D /	E /
	4-IX	FOURTH INTERVAL		A	B	C	D	

MEAP 76-77 ITEM ANALYSIS GRADE 4 EXPERIMENTAL

EXPERIMENTAL BOOK 32

MUSIC OBJ 03 CODE=1-2 NCNT= 469 WEIGHTED NCNT= 150470 ATTAINMENT RATE

			A	B	C	D	E
P-VALUE WEIGHTED	+0.36	ATTAINERS OF OBJ	26.1	4.6	0.0	0.0	/
PT BISERIAL	+0.63	NON-ATTAINERS OF OBJ	9.2	57.7	2.4	0.0	/
CORR PT BISERIAL	+0.42						
FREEMAN INDEX	+0.72	TOTAL TAKING OBJ.	35.3	62.3	2.4	0.0	/

		A	B	C	D	E
E-I	FIRST PITCH	54.9	40.7	4.4	/	/
E-II	SECOND PITCH	40.8	53.6	5.6	/	/
E-III	THIRD PITCH	44.0	52.7	3.3	/	/
E-IV	FOURTH PITCH	33.8	62.1	4.1	/	/
E-V	FIFTH PITCH	20.5	50.8	28.8	/	/
E-VI	FIRST INTERVAL	49.9	47.1	3.1	/	/
E-VII	SECOND INTERVAL	42.0	54.2	3.7	/	/
E-VIII	THIRD INTERVAL	39.7	55.8	4.6	/	/
E-IX	FOURTH INTERVAL	A	B	C	D	E

EXPERIMENTAL BOOK 32
MUSIC OBJ 54 CODE-3-1 NCNT= 459 WEIGHTED NCNT= 150470 ATTAINMENT RATE=

ITEM				A	B	C	D	E
	P-VALUE WEIGHTED	+0.22	ATTAINERS OF OBJ	18.1	0.0	0.0	0.0	/
	PT BISERIAL	+0.54	NON-ATTAINERS OF OBJ	0.0	78.4	3.5	0.3	/
	CORR PT BISERIAL	+0.36						
	PEARMAN INDEX	+1.00	TOTAL TAKING OBJ.	18.1	78.4	3.5	0.0	/
	C-I		SCORE OF FIRST PATTERN	A 8.9	B 27.2	C 59.0	D 4.8	E /
	C-II		SCORE OF SECOND PATTERN	A 9.3	B 15.9	C 69.3	D 6.5	E /
	C-III		SCORE OF THIRD PATTERN	A 5.9	B 13.7	C 75.6	D 4.8	E /
	C-IV		SCORE OF FOURTH PATTERN	A 4.5	B 12.9	C 77.6	D 5.2	E /
	C-V		COMPLETENESS OF RESPONSE	A 91.2	B 5.3	C 3.5	D /	E /

ITEM 7

			A	B	C	D	E
P-VALUE WEIGHTED	+0.09	ATTAINERS OF OBJ	13.1	0.0	0.0	0.0	/
PT BISERIAL	+0.31	NON-ATTAINERS OF OBJ	0.0	82.1	4.8	0.0	/
CORR PT BISERIAL	+0.12						
HERMAN INDEX	+1.00	TOTAL TAKING OBJ.	13.1	82.1	4.8	0.0	/

		A	B	C	D	E
7-I	COMPLETENESS OF RESPONSE	48.5	48.5	4.8	/	/

		A	B	C	D	E
7-II	OVERALL SCORE	9.0	8.7	4.6	30.3	/

AP 76-77 ITEM ANALYSIS GRADE 4 EXPERIMENTAL

XPERIMENTAL BOOK 32

ISIC OBJ CS CODE-2-4 NCNT= 459 WEIGHTED NCNT= 150470 ATTAINMENT RATE= 3

			A	B	C	D	E
M 8							
	B-VALUE WEIGHTED	+0.33	ATTAINERS OF OBJ	32.9	0.0	0.0	0.0	/
	PT BISERIAL	+0.46	NON-ATTAINERS OF OBJ	0.0	61.0	6.1	0.0	/
	CORR PT BISERIAL	+0.21						
	BRENNAN INDEX	+1.00	TOTAL TAKING OBJ.	32.9	61.0	6.1	0.0	/

		A	B	C	D	E
B-I	COMPLETENESS OF RESPONSE	81.0	12.2	6.1	/	/
B-II	PITCH SCORE	3.1	7.0	89.8	/	/
B-III	RHYTHM SCORE	24.2	26.1	49.1	/	/
B-IV	DESCRIPTION OF RESPONSE	68.6	16.8	8.9	6.8	/

EXPERIMENTAL BOOK 43
MUSIC OBJ #1 CODE-4-1 NCNT= 457 WEIGHTED NCNT= 183723 ATTAINMENT RATE

ITEM 1

			A	B	C	D	E
P-VALUE WEIGHTED	+0.44	ATTAINERS OF OBJ	43.3	0.0	0.0	0.0	/
PT BISERIAL	+0.79	NON-ATTAINERS OF OBJ	0.0	54.7	1.8	0.0	/
CORR PT BISERIAL	+0.25						
SPEARMAN INDEX	+1.00	TOTAL TAKING OBJ.	43.3	54.5	1.8	0.0	/

		A	B	C	D	E
1-I	COMPLETENESS OF RESPONSE	38.0	12.3	1.8	/	/
1-II	PITCH SCORE	14.7	13.3	24.7	45.3	/
1-III	RHYTHM SCORE	40.7	25.6	31.5	/	/

NEAP 74-77 ITEM ANALYSIS GRADE 7 EXPERIMENTAL
EXPERIMENTAL BOOK 43
MUSIC OBJ 02 CODE-6-1 NCNT= 457 WEIGHTED NCNT= 183723 ATTAINMENT RATE=

ITEM 7

			A	B	C	D	E
P-VALUE WEIGHTED	+0.05	ATTAINERS OF OBJ	4.4	0.0	0.0	0.0	/
PT BISERIAL	+0.43	NON-ATTAINERS OF OBJ	0.0	92.8	2.8	0.0	/
CORR PT BISERIAL	+0.19						
HERMAN INDEX	+1.00	TOTAL TAKING OBJ.	4.4	92.8	2.8	0.0	/

		A	B	C	D	E
7-I	COMPLETENESS OF RESPONSE	89.5	7.2	2.8	/	/

		A	B	C	D	E
7-II	DESCRIPTION OF RESPONSE	2.8	1.5	92.3	/	/

MEAP 76-77 ITEM ANALYSIS GRADE 7 EXPERIMENTAL

EXPERIMENTAL BOOK 43

MUSIC OBJ 3 CODE-6-2 CNT= 467 WEIGHTED CNT= 183723 ATTAINMENT RATE

ITEM 2

			A	B	C	D	E
P-VALUE WEIGHTED	+0.25	ATTAINERS OF OBJ	26.9	0.0	0.0	0.0	/
PT BISERIAL	+0.72	NON-ATTAINERS OF OBJ	0.0	38.1	35.0	0.0	/
CORR PT BISERIAL	+0.23						
BRENNAN INDEX	+1.00	TOTAL TAKING OBJ.	26.9	38.1	35.0	0.0	/

		A	B	C	D	E
3-I	COMPLETENESS OF RESPONSE	25.5	21.2	17.7	35.0	/
3-II	PITCH SCORE	20.8	12.0	31.7	/	/
3-III	RHYTHM SCORE	9.0	10.9	44.6	/	/